GYNAECOLOGICAL AND MENTAL HEALTH OF LOW-INCOME URBAN WOMEN IN INDIA

by

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ABSTRACT

This thesis reports on the gynaecological and mental health of low-income urban women in Thane, India. The research objectives were to study the women's perception and experience of gynaecological symptoms, their association with mental ill-health and the role of social support and social networks in these two morbidities.

A combination of quantitative and qualitative research methods was used in the form of a survey questionnaire and in-depth interviews. Gynaecological morbidity was measured by women's perception of morbidity and prevalence was calculated on women's reporting of symptoms. The Self Response Questionnaire (SRQ-20) was used to calculate mental ill-health 'cases'. Social support and social networks were separately explored for the first time in an Indian community setting using an adapted version of the Close Persons Questionnaire (CPQ).

There was a high reporting (50.6%) of gynaecological symptoms in the community with reproductive tract infections, menstrual problems, urinary infections and prolapse being most commonly reported. 17.9% of the women were 'cases' of mental ill-health. Gynaecological morbidity was associated with poor mental health and affected women's social life. Women's age and reporting of a major illness were associated with gynaecological and mental health, whereas unemployment was associated with mental ill-health. Levels of social support were not associated with either morbidity. Higher levels of negative support were received from spouses, by the women. An extensively used social network appeared to protect against mental ill-health.

The study's conclusions point to the need to plan more appropriate (participatory) and culturally sensitive programmes for the identification and treatment of gynaecological and mental health at the community level. The research findings emphasize the need for integration of mental health services at the primary health level especially in low-income urban communities and the recognition of social networks in maintaining positive health.

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DEDICATION

To Sarjit and Mahika, for their love and endurance and my parents for their love, faith and 'being there' as always !

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ABBREVIATIONS

AIDS - Acquired Immunodeficiency Syndrome

CGHS - Central Government Health Scheme

CPQ - Close Persons Questionnaire

DSM III-R - Diagnostic and Statistical Manual Version III - Revised

EM - Explanatory Model

ESIS - Employees State Insurance Scheme

HIV - Human Immunodeficiency Virus

IUD - Intra-uterine Device

KI - Key Informant

MCH - Maternal and Child Health

NCIH - National Council for International Health

NGO - Non Government Organisation

OPD - Outpatient Department

PHC - Primary Health Care

PID - Pelvic Inflammatory Disease

PSM - Preventive and Social Medicine

RA - Research Assistant

ROC - Receiver Operator Curve

RTI - Reproductive Tract Infection

SESS - Self Evaluation and Social Support

SRQ-20 - Self-Response Questionnaire 20

STD - Sexually Transmitted Disease

TB - Tuberculosis

TMC - Thane Municipal Corporation

UNDESA - United Nations Department of Economic and Social Affairs

UTI - Urinary Tract Infection

WHO - World Health Organisation

CHAPTER 1: INTRODUCTION AND LITERATURE REVIEW

1.1 BACKGROUND

The WHO estimates that over 200 million Reproductive Tract Infections (RTIs) due to sexually transmitted pathogens occur each year among women in developing countries. Some 3 to 5 million women are seropositive for the Human Immunodeficiency Virus (HIV) in developing countries, millions have unsafe abortions that result in infections and each year uncounted numbers incur infection because of inadequately performed family planning, prenatal, delivery and postnatal services. About 500,000 women die annually of pregnancy related causes, primarily infection (Ronald and Aral, 1992).

Reproductive morbidity and especially RTIs and other gynaecological morbidity conditions are thus common diseases with profound social and health consequences for Third World women, men and children. As one of the world's most neglected problems these morbidity are related in important ways to girls and women's basic sexual and reproductive health. Yet in allocating scarce human and financial health care resources to/within developing countries, policy makers, programme planners and international donor agencies have generally given low priority to gynaecological and other morbidity conditions in women.

In part this is because of the mistaken belief that these morbidity (especially RTIs) are generally not fatal, that they are too expensive and too complicated to treat and that

in most developing countries they affect only small and specialised segments of sexually active adults such as prostitutes. Each of these assumptions can be challenged by a growing body of evidence (Dixon-Mueller and Wasserheit, 1991; Schmunis, 1993; Gittelsohn *et al.*, 1994; Zurayk *et al.*, 1995; Brabin *et al.*, 1995).

Furthermore the magnitude of gynaecological morbidity is expected to grow in the near future because of urbanisation and changes in sexual behaviour of the younger population. It is recognised that a number of factors probably contribute to the high prevalence of RTIs and other gynaecological morbidity found in many developing countries. Population pyramids that are heavily weighted with young individuals, explosive urbanisation and low status of women are important. In addition low levels of education and inadequate health information fosters misconceptions about these morbidities and discourages preventive practices (Wasserheit and Holmes, 1992; Pachauri, 1994; Bhatia and Cleland 1995).

The aim of this study is to contribute to the understanding of gynaecological morbidity conditions in low-income urban community settings, from the women's perspective and experience (emic perspective). It further aims to understand the association between psychiatric and gynaecological morbidity as well as the role of social support and social networks in women at community levels. It is hoped that the information gained can be linked to reproductive health and primary mental health programmes in the study area as well as in other areas - thus contributing to policy direction on matters of primary health care in urban community settings.

The next section discusses the changing global emphasis on women's health vis a vis the Alma Ata declaration (1978). The increasing attention received by gynaecological morbidities in women from international bodies/ organisations and at international fora following the realisation that women's health should not be seen only in relation to their role as mothers and child care givers is then discussed. The section also covers the question of why certain disadvantaged women are at greater risk of reproductive morbidity. The prevalence of gynaecological morbidity globally and in the developing world and the likely impact on womens' health is next presented followed by a discussion on research on women's health in India in general and the magnitude of gynaecological morbidity and its likely impact on women's health in particular.

1.2 LITERATURE REVIEW

1.2.1 Gynaecological morbidity: the global perspective

After the Alma-Ata Declaration (1978) and other initiatives directed to Primary Health Care (PHC), women were referred to as the primary caretakers of health, particularly the health of children in families. Attention shifted to the role of women as decision makers and repositories of information concerning the maintenance of children's health including their key role as food providers/ organisers in the family. To a limited extent the emphasis on child survival directed attention to women's reproductive roles particularly in relation to pregnancy, childbirth and lactation (Bentley *et al.*, 1990). It is widely reported that the needs of women in the developing world have focused mainly on their roles as mothers and child care givers (Leslie, 1991; Mcguire and

Popkin, 1989; Winikoff, 1988). Also women's health has been viewed by health care providers and social institutions in the light of producing healthy babies (Faundes *et al.*, 1989) as though reproductive services are meant to be in the mandate to treatment through primary health care services, they are far from ideal.

For the first time, in 1987 the Safe Motherhood Programme (WHO, 1990) recognised the inferior status of women's health as a reflection of the general status of women in society, especially in relation to aspects of women's health as connected to sexuality and reproduction (Faundes *et al.*, 1989).

Khattab (1992) argues that the past few years have witnessed a growing concern amongst health and social science professionals with social, cultural and psychological forces as they act upon the reproductive health of women in developing countries. Further questions have been raised as to why disadvantaged women in rural and low income areas are at greater risk for pregnancy complications and maternal mortality, why some groups of women are more likely than others to experience gynaecological problems, particularly reproductive tract infections with potentially devastating results and why women are not using health services more frequently. The answers to these questions seem to lie in social conditions which constrain or inhibit women's positive health related behaviour (Khattab, 1992).

Gynaecological morbidity including RTIs have started to receive increasing attention at international fora and by international bodies, such as WHO, policy groups and donor agencies, probably as a result of increased attention to the association of RTIs

with HIV infection and to high maternal morbidity and mortality associated with sepsis of the reproductive tract (Wasserheit and Holmes, 1992).

McDermott *et al.* (1990) in their review article on 'Infections' presented at the 1991 National Council for International Health (NCIH) Conference in Washington DC, report that the prevalence of infections in women is extensive and current knowledge probably reflects only the tip of the ice-berg. These infections include a broad range: Sexually transmitted diseases (STDs) including HIV and Acquired immunodeficieny syndrome (AIDS), overgrowth of endogenous organisms, infections acquired from unsafe abortions and deliveries, female circumcision and unsafe practices during reproductive years. Their consequences can be severe and life-long resulting in not only medically recognised mortality and morbidity but also social ostracism due to either the physical symptoms and signs such as incontinence, painful sexual inter-course, foul-smelling vaginal discharge and skin lesions or to their social sequelae including divorce due to infertility and the inability to work (Wasserheit and Holmes, 1992). Brabin *et al.* (1995), Younis *et al.*, (1992) and Zurayk *et al.*, 1995 and Cooper *et al.*, (1991) also report similar findings from Western, Northern and South Africa.

Wasserheit and Holmes (1992) further report that in resource poor settings around the world, gynaecological morbidities are extremely common and the consequences for health and social well-being of the women (as in the case of subsequent infertility) and their children (due to development of congenital defects or illness as a result of infection in the mother) are frequent and potentially devastating. They further assert that because of socio-cultural factors and structured barriers to care both the incidence

and the impact of gynaecological sequelae are likely to be particularly great in the Third World. Further demographic changes (rapid urbanisation and population growth) in the developing world have placed an ever greater proportion of these populations at risk of gynaecological morbidity and their sequelae.

As a result of problems in study design, reporting, specimen collection and laboratory methods, data on the prevalence of RTIs in the developing world are often difficult to interpret in terms of internal validity and generalizability. Nevertheless some observations appear consistently. Firstly, that RTIs and related morbidity are common (as high as 15% even in low-risk populations) in almost all of the developing countries in which they have been investigated, even among asymptomatic populations and low-risk individuals such as family planning or ante-natal clinic attenders and adults sampled in population-based studies. Second, in most countries STD rates are highest among high-risk populations such as commercial sex workers and men in occupations involving extended or recurrent separations from family (truck drivers, migrant workers). Finally, certain infections (chlamydial) despite their potential role in upper tract infection, infertility and adverse outcomes of pregnancy remain largely ignored as causes of morbidity in Third World women (Wasserheit & Holmes, 1992).

1.2.2 Gynaecological morbidity in India

1.2.2.1 Magnitude of gynaecological morbidity in India

A review by Sullivan (1989) of Indian literature on ' Women's Health Behaviour' demonstrates that studies that have examined morbidity in women apart from those related to pregnancy and childbirth are rare. However a recent initiative by the Ford Foundation, India has addressed this gap in knowledge in India through a grant to the John Hopkins University, Department of International Health which has initiated multiple activities to increase the social science research capacity for women's health in India (Bentley *et al.*, 1990).

As a consequence of the Ford initiative and other studies since 1988, research in India (see summary of studies -table 1.1) shows that there is a large reservoir of unmet needs among women (high percentage of gynaecological and related morbidity which are not reported or treated at local health centres), particularly in low-income communities that are not addressed by current Primary Health Care (PHC) practices and which are by-passed by the various Child Survival Programmes.

Also it is seen that in general, health services for women have been conceived with little regard for their needs, demands and the socio-cultural milieu in which they live (the timing of the clinics, the absence of female doctors and the emphasis on family planning bearing evidence to this).

In India there is a large absolute number of women potentially in need of reproductive health care: approximately 133 million women are in the reproductive age group. The demographic trends in India have been important indicators of the womens' health states. The ratio (933 females:1000 males) found in the 1981 national census is a clear indicator of the higher mortality risk experienced by females. The average Indian woman has about 8 pregnancies and live births while typically 4 or 5 of her infants survive. She is estimated to spend 80 per cent of her reproductive years pregnant or lactating. The reproductive morbidity including RTIs and other morbidities exercise an adverse influence on her productive role in society and a detrimental effect on her health profile (Luthra *et al.*, 1992).

Though a majority of the studies on gynaecological morbidity are limited to urban, clinic based populations and to small sample sizes, they nonetheless provide useful information on the pattern, magnitude and types of infection prevailing in different locations and also supplement the data available from official sources. Research in India on women's health can be broadly divided into two categories: (a) community based studies which employ medical tests to study the prevalence of morbidity in women as well as self reporting of symptoms and (b) hospital based studies which employ mainly clinical tests to verify women reporting morbidity. In the former the target population is selected from the general community while in the latter the population is selected from the women reporting to the hospital/clinic with some complaint. The next section describes these two type of studies in India in the area of gynaecological and related morbidity and the impact of these morbidity on womens'

health. It should be noted that some of the community based studies reported in table 1.1 are conducted in the project areas of the concerned hospital.

1.2.2.1.1 Community based studies

As summarised in table 1.1, a recent study by Bang *et al.*, (1989) of 650 rural Indian women found that 92 per cent of all women reported one or more gynaecological or sexually transmitted disease with an average of 3.6 diseases per woman. About half of the burden of illness comprised infections such as pelvic inflammatory diseases, vaginitis, cervicitis etc. However only 8 per cent of the women had undergone gynaecological examination and treatment.

In a study in a field practice area of the Institute of Cytology and Preventive Oncology situated near Delhi (Alipur rural block) it was noted on direct questioning that 77 per cent (n= 1705) of the women had gynaecological complaints. White vaginal discharge, lower abdominal pain and backache made up the majority of the complaints. It was also noted that the distribution of symptoms was similar for women over and below 35 years of age (Luthra *et al.*, 1992).

TABLE 1.1: COMMUNITY BASED STUDIES IN WOMEN'S GYNAECOLOGICAL MORBIDITY IN INDIA

Article	Study objectives	Sample size	Method	Key findings	Other lessons
Bang et al., (1989). Rural India	prevalence of gynaecological morbidity amongst rural women	650 women from two villages	cross-sectional study. Women over 13 who had reached menarche	-92% of all women had one or more gynaecological or sexually transmitted disease -on an average each woman was suffering from 3.6 separate complaints -about half of the burden of illness comprised infections such as PID, vaginitis, cervisitis etc.	-inspite of the heavy burden of disease, only 8% of the women had sought treatment -the no response rate was 41%
Patel et al.,(1991) Urban and rural Baroda	prevalence of different diseases and local names, symptoms by which women recognise them and the perceived causes and possible treatment for the morbidities	43 women (urban) and 109 women (rural)	-informal in-depth interviews with free listing and probing -focus group discussions	-57% reported white discharge -37% reported back pain -20% women reported each of the following -heavy bleeding, miscarriage, rectal prolapse, fever at time of delivery -other morbidities mentioned were - painful mensus,breast sepsis, amenorrhoea sepsis,prolapse	-a similar pattern of response was obtained from rural and urban women except in the case of white discharge , which was higher in the rural women (reported)
Kannani S.,(1991) Urban Baroda	study the 'emic'* perspective of women with respect to female physiology, adolescent development and women's morbidity and health seeking behaviour	women from 1300 slum families-married women in the age group of 25-50 years with at least one child	-focus group discussions with 300 women -focused ethnographic interviews by health provider with 20 women and 15 field workers -informal conversation with 8 health providers and ethnographic interviews with 30 women	most frequently elicited responses -91% menstrual disorders -67% leucorrhea -56% backache -51% fever -49% weakness -46% headache -32% abdominal ache -31% body ache	-78% of women who had never used contraceptives had gynaecological complaints -68% of rural women attributed problems to tubectomy

* for further explanation of term, see section 3.1.4

TABLE 1.1 continued

Article	Study objectives	Sample size	Method	Key findings	Other lessons
Latha et al.,(1991) Urban Baroda	to understand perceptions of health providers and women regarding reproductive health morbidity in slums	-health providers from community -married women in the age group of 18-45 years. a sample of equal proportion of Hindu and Muslim women was taken	women reporting any of the following 3 conditions in the 3 months prior to the study at the local health centre menstrual disorders, leucorrhea and anaemia -tools used were: illness narratives (women), key informant interviews and scenarios (health providers)	-women attributed disorders to reproductive function. contraceptive use and 'hot'food -health providers attributed the disorders to unhygienic genital practices in the women	
Mulgaonkar V.,(1991) Urban slums in Bombay	women's perceptions for not attending local health clinic	100 women (random selection) who did not report for gynaecological examination in local clinic	key informant interviews with the selected women	-majority of the women tried home remedies -they only went to the clinic when illness was perceived as severe or unbearable	-the women reported to the local clinic in case of 'common' problems such as -for delivery -or on missing periods
Bhattacharya S., (1991) Rural West Bengal	prevalence and perception of gynaecological morbidity in rural women	2 sub studies a) sample of 121 women to study prevalence b) sample of 158 women in an on-going study of perception of gynaecological morbidity	a) random selection from women attending under 5 clinic and family spacing clinic b) from on-going longitudinal study on a sample of 700 women in the age group of 13-45 years, non-pregnant and non-puerperal	a) structured schedules and pathological and clinical exams. b) 2-3 clusters from 3 villages depending on size of village -key informant interviews, direct observation and in-depth interviews -structured schedules and medical exams	-61% white discharge -34% foul smell with discharge -10% blood tinged discharge -58% low backache -21% dyspareunia -18% vaginal itching -18% burning sensation during micturition
Luthra et al., (1992) Rural India (Alipur block)	evaluate the feasibility of using paramedical staff to collect cervical smears in Primary Health Centres	1705 women	direct questioning and medical exam with cytological diagnosis	-on direct questioning 77% of the women had gynaecological complaints; of which -white discharge 26% -backache 9% -menstrual irregularity 6.5% -lower abdominal pain 6%	distribution of symptoms was similar for women below and above 35 years of age

TABLE 1.1 continued

Article	Objectives	Method		Key findings	Other lessons
Shatrugna V, Vidyasagar P. and Sujata T., (1993) Urban Tamil Nadu	to study the relationship between women's paid work, access and utilisation of health care and women's health status	340 households from 1124 kutcha units in one urban slum	-107 self employed, 101 wage for labour, 29 unpaid family worker and 103 house wives were interviewed -case studies and life histories used to gather qualitative data	-1/4 women reported women's morbidity. 30% of these reported gynaecological morbidity. -women in the work for labour and self employed categories had higher gynaecological morbidity and symptoms of general feeling of ill-health -majority of the women did not seek medical help -27% sought cheap care or government hospitals or tried home remedies/neighbour/medical shops or para medical person	the information was collected on the following areas in 12 visits background information (1 visit) utilisation of health care (1 visit) morbidity (every alternate month- 6 visits) shift in women's occupations (12 visits)
Chatterjee M., (1994) Urban Gujarat (Ahmedabad) and Madya Pradesh (Indore)	to explore the nature and scale of health problems experienced by self employed women with special emphasis on occupational health problems	-100 ready made garment workers -156 bidi workers -150 agarbatti workers -150 masala workers	Participatory research involving - area visits and discussions with workers - group meetings with workers outside their work place - discussions with local health functionaries and - 4 cross-sectional surveys to collect data on prevalence of health problems	-self employed women are poor, work long hours for low wages and most are illiterate -the majority of workers reported 2 or more gynaecological morbidity -58% of bidi workers reported early periods -54% of bidi workers and 57% of readymade garment workers reported white discharge -54% of masala workers reported burning sensation while urinating -between 53% to 80% of all the categories reported pain in lower abdomen	
Bhatia JC and Cleland J., (1995) Urban and rural Tamil Nadu	to identify pathways by which the mother's education influences the health and survival of child	3600 (2400 in rural areas and 1200 from the town)	all eligible women living in the town and 48 villages with a population of at least 500 persons were included in the sample	-1/3 women reported at least one reproductive morbidity -7.3% to 10.7% women reported menstrual problems -16.9% women reported lower reproductive tract infections -5.2% reported upper reproductive tract infections -23.4% reported anaemia	-as the study was explanatory, sampling was based on logistical considerations -only women aged 35 years and less and with one living child were included in the sample

A sample of 152 women from urban slums and rural Baroda district (43 urban and 109 rural) showed a similar pattern of responses among both sets of women. The most commonly mentioned disease/symptom was white discharge (57%) followed by back pain (37%). Twenty per cent of the women mentioned that they were suffering from heavy bleeding, 'ratwa'(syphilis), miscarriage and 'amboi' (rectal prolapse). A few of the gynaecological diseases mentioned were breast sepsis, 'suva rog' (fever at the time of delivery), painful menses, prolapses, transverse presentation, uterus infection and amenorrhoea. The proportion of responses against various diseases was similar in the two populations, except white discharge which was considerably higher amongst the rural respondents as compared to their urban counterparts (Patel *et al.*, 1991).

Another study from an urban slum in Baroda where a sample of women between the ages of 20-25 years was selected from 1300 families elicited the following responses regarding common morbidity:

-menstrual disorders (91%);

-leucorrhea (67%);

-backache (56%);

-fever (51%);

-weakness (49%);

-headache (46%);

-abdominal pain (32%) and

-body ache (31%).

Almost every woman contacted in this study either individually or in a group reported to have some health disorder or the other - either of a general nature (fever, malaria,

body ache, weakness) or specific to the reproductive system (leucorrhea, menstrual disorders) (Kannani, 1991).

Other rural community based studies (Kannani, 1991) have also revealed leucorrhea and menstrual disorders as the most commonly reported gynaecological illnesses among low-income Indian women followed by symptoms such as body ache, weakness, and headache. Another community based study in an urban slum in Baroda selected an equal number of Hindu and Muslim women between the ages of 18-45 years. From health records available with the local health centre, this study compared the perspectives of women and the health practitioners regarding reproductive health morbidity of women who had experienced an illness episode of either leucorrhea, menstrual disorder or anaemia in the last three months. They found that women perceived contraceptive use, hot foods and reproductive function as responsible for their gynaecological morbidity, while the health providers perceived unhygienic genital practices as the main etiological factor for morbidity among these women (Latha *et al.*, 1991).

In another urban slum study in Bombay (Mulgaonkar, 1991) where a sample of 100 women who did not go for treatment at the local health clinic were interviewed and medically examined for different gynaecological morbidity, it was found that a majority of the women had gynaecological morbidity. Most of the women reported that they used home remedies for treatment of the morbidity as they did not like to go to the health clinic for treatment. They reported that they only went to the clinic when they perceived the problem to be severe as in the case of severe bleeding or severe

foul smell or blood stained white discharge with pain, inability to have intercourse, severe general weakness which confined them to bed, severe burning micturition and lumps in the abdomen and breast. They reported that they normally went to the clinic for common problems (perceived as common by the women) such as for delivery or when they missed a period.

Another study (George and Jaswal, 1994) on 'Understanding sexuality' amongst poor women from different ethnic backgrounds in Bombay (sample size 36 women) found a very high prevalence (approximately 90%) of unreported (to the local allopathic health centre or hospital) morbidity among the women. The morbidity conditions ranged from severe abdominal pain, menstrual disorders, sterilization related pain, profuse white and red discharge to general weakness. Almost all women reported one or more gynaecological morbidity. However the women either did not seek treatment for these morbidity or discontinued the treatment after one or two visits to the local clinic. The main reasons cited for this were lack of support from the immediate family, the attitude of the health staff at the clinic or the perception of the morbidity (by the women) as a womans' problem.

Two studies among low income urban women, one in southern India and the other in western India (Shatrugna *et al.*, 1993 and Chatterjee, 1994) report that women who worked for wages reported more gynaecological morbidity. Women reported two or more gynaecological morbidity each. Most women did not seek medical help but resorted to home remedies, cheap care, para medical assistance and help from neighbours and medical shops.

A recent study in a sub-district of Tamil Nadu near Bangalore (Bhatia and Cleland, 1995) reported that one-third of 3595 women from one town and 48 villages self-reported reproductive morbidity. Reproductive tract infections (22.1%), menstrual problems (7.3-10.7%) and anaemia (23.4%) were the most commonly reported gynaecological morbidity conditions followed by haemorrhoids, urinary tract infections and prolapse.

1.2.2.1.2 Hospital based studies

Several large hospital-based cytological studies (see table 1.2) of the frequency and type of RTIs reveal a varying picture. The largest study (Luthra *et al.*, 1992) in terms of sample size entailed screening of 117,411 women attending gynaecological clinics of 7 hospitals in Delhi. 72.3 per cent of these women were diagnosed with inflammation, 1.6 per cent with dysplasia of various grades and 0.1 per cent with malignancies.

In another study (Luthra *et al.*, 1992) of 8,307 women who attended the gynaecology outpatient clinic of a hospital in Lucknow from 1971 to 1980, the association between contraceptive use and infection was explored in 3,374 of the women using different types of IUD and hormonal contraceptives. Preliminary findings from an on-going hospital based study (Luthra *et al.*, 1992) indicate a very high proportion of lower genital tract pathology (72%).

TABLE 1.2: HOSPITAL BASED STUDIES IN GYNAECOLOGICAL MORBIDITY IN INDIA

Study	Objective	Sample	Method	Key findings	Other lessons
Luthra et al. (1992) Urban India (Delhi)	prevalence of reproductive tract infections	Women enrolled at 6 hospitals in Delhi Ongoing study, 21,599 women	Laboratory tests	-72% had lower genital tract pathology, of which 49% had cervical erosion 10% had hypertrophy of cervix 10.8% had cervicitis 8.8% had cervical erosion that bleeds on touch 5.5% had unhealthy cervix 2.4% had prolapsed uterus	
Luthra et al. (1992) Urban India (Delhi)	prevalence of reproductive tract infections	Cytological screening of 117,411 women attending gynaecological clinics of 7 hospitals in Delhi	Cytological screening	72.3% had inflammation 0.4% had mild dysplasia 1.1% had severe dysplasia 0.1% had malignancy	only 26% smears normal
Luthra et al. (1992) Urban India (Lucknow)	prevalence of reproductive tract infections	Cytological monitoring of cervical smears carried out in 8,307 women attending the gynaecological out - patient clinic of a hospital from 1971 to 1990	Laboratory tests	5% had cervical dysplasia 1% had malignant smears 4% had trichomonas infection (STD)	STDs were highest in women 20 years of age

Thus the magnitude of gynaecological morbidity in India is evident from the studies cited above. The key findings in the studies (tables 1.1 and 1.2) show the high prevalence rate of gynaecological morbidity in both urban and rural women. As the extent of the problem is clearly seen in the data presented in these studies there is no need for further prevalence data.

The above studies (summarised in tables 1.1 and 1.2) show that most of the community based studies have concentrated on the project areas of the concerned organisation and the hospital based studies have selected samples from the population reporting to the hospital for ailment. Thus the samples in both cases may have a selection bias. In the hospital sample the bias is self explanatory. In the case of the community based studies as the sample was selected from the project areas where the population is familiar with the health providers and recipients of services from the health centre the responses might be coloured in favour of what are perceived as 'required answers'. Thus certain complaints might also be suppressed as the women might prefer traditional medicine in some cases rather than treatment at the local centre. It should be noted that half of the community based studies used only qualitative methods for data collection while the hospital based studies employed purely quantitative methods (survey research). Further, refusal rates were either not mentioned or were not further explained to understand why some women refused to participate in the concerned study. The community based studies provide socio-demographic features of the communities from which the population was selected as well as the women who participated in the study which is necessary to understand the psycho-cultural milieu of the morbidity under study as well as providing information

on the social, economic, cultural or political factors which cause, hinder or inhibit the women's morbidity. However none of the studies has tried to measure/understand the women's perception of these morbidity and the impact that they have on them and their lives, nor the various support and networks which women use to cope with these morbidity in the absence of access (physical and cultural) to services.

1.2.2.1.3 Impact of Gynaecological morbidity

From the above studies especially the community based studies, it is clear that the prevalence of gynaecological morbidity amongst low-income group women is very high (ranging between 50-72%). However women appeared unwilling to seek medical treatment for their problems or did not recognize them as health problems at all. In many cultures women accept vaginal discharge, discomfort during intercourse or even the chronic abdominal pain which accompanies some gynaecological morbidity (especially RTIs) as an inevitable part of their womanhood. These morbidity are to be endured along with other reproductive health problems such as sexual abuse, menstrual difficulties, contraceptive side effects, miscarriages, still-births and potentially life threatening clandestine abortions or still-births (Brabin *et al.*, 1992).

Gynaecological morbidity have an additional element of shame and humiliation for many women, because the women are considered unclean (in most Hindu homes a menstruating women is perceived as a 'pollutant' or as 'polluted' and is forbidden to touch the water pot or pray to the family deity). The invisibility created by psycho-cultural barriers and taboos associated with reproduction and sexuality are responsible

for the belief that gynaecological morbidity should be endured and create a 'culture of silence ' within families and communities that can severely compromise women's health, both physical and mental. Besides the cultural and social taboos related to gynaecological morbidity, women's concepts of 'normality' further inhibit them from seeking treatment.

Thus it is seen that inspite of the increasing attention given by international and national health organisations/bodies to the health problems of women, especially to gynaecological and related morbidity conditions in women from low-income groups in developing countries, due to social customs and taboos related to women's health and the status of women in these countries, very few women report morbidity to the allopathic health providers. Further, women from low-income urban areas face further hurdles in access to health care as discussed in the following section on impact of urbanisation on women's health. Here the effects of migration on under served populations, urbanisation and its impact on women's mental health and the presence or absence of different types of social support and social networks in coping with gynaecological and related morbidity are discussed.

1.2.3 Women's health and urbanisation, mental health and social support and networks

1.2.3.1 Urbanisation and its impact on women's health

In developing countries it is estimated that 44% of the population will be living in urban areas by the year 2000. Some Third World cities are expected to reach

extremely large sizes by the end of the century: Mexico City 31 million; Sao Paulo 25.8 million; with Rio de Janeiro, Bombay , Calcutta and Jakarta each exceeding 12 million (Harpham (1994) quoting World Bank, 1984).

Harpham (1992) further says that while the developing world is in general undergoing urbanisation at a rapid rate, regions with lower absolute levels of urbanisation such as sub-Saharan Africa and parts of Asia are experiencing some of the highest levels of migration from rural to urban areas and the most rapid relative rates of urbanisation.

The UNDESA (1985) asserts that approximately 60% of urban growth can be attributed to natural increase and the remainder to migration (40%), a finding supported by empirical data (Rogers, 1982; Preston, 1979). Thus though natural increase is responsible for most urban growth in the Third World, the age selectivity of migrants (through their contribution to natural increase) as well as regional variations in urbanisation complicates the issue (Kasarda and Crenshaw, 1991).

In most regions of Asia, the population densities on arable land lead to diminishing returns and excessive subdivisions of peasant holdings and these problems can lead to landlessness, under-investment and out-migration from rural areas (Kasarda and Crenshaw, 1991). These rural to urban migrants form the 'under-served' urban population of the Third World metropolises. As Bachrach (1992) says this under-served urban population has the following features:

-lack of access to human services of all kinds;

-in marked contrast to other urban populations, availability of mental health and social support programmes often seem to pass them by;

-in general the members are severely stigmatised- a circumstance that exacerbates their difficulty in receiving adequate access to services;

-they are invisible populations in that they often go unnoticed by service providers

-they may not only be physically hidden from the service system but the uniqueness of their service needs is also frequently masked; and

-society also often reacts to the members in stereotyped and unproductive ways -the reaction may be in the form of political polarization, so that the needs of these individuals become the focus of unwarranted political controversy (such as providing low income housing or health services more relevant to their needs).

As Kasarda and Crenshaw (1991) quote Teune, 1988 and Bradshaw and Fraser, 1989, " the level of urbanisation has been associated with numerous positive societal outcomes such as technological innovation, economic progress, and higher standards of living''. It has also been linked to social and environmental problems and to perceived mismatches between population distributions and economic development (Dogan and Kasarda, 1988a,b; Timberlake, 1985).

Thus the increasing trends in urbanisation, especially in some Third World cities in Asia are leading to some of the highest levels of migration from rural to urban areas and the most rapid relative rates of urbanisation. Also these migrants form the 'underserved' urban populations and are characterised by lack of access to human services, lack of availability of mental health and social support programmes,

difficulties in receiving adequate access to services and overlooking of their specific/unique service needs and political polarisation by other urban groups due to unwarranted political controversy in special issues related to them such as low-income housing or relevant health services. All these factors have an impact on the 'under-served' populations and more so on the most vulnerable group among them, namely the women. This issue is discussed in the next section.

1.2.3.2 Urbanisation, mental health and social support and networks

Bachrach (1992) quotes Schwab and Schwab (1978) that "mental illness is more common in environments characterised by instability, turmoil, adversity, corruption and social disintegration and these are certainly conditions that abound in metropolitan centres". Urbanisation has produced major transformations in Third World societies which have been particularly critical for women. Women have higher rates of unemployment than men and urban working-class households headed by women (a growing phenomenon in the Third World, see Tinker and Bramsen, 1977:37) have less access to resources and are more dependent on the informal sector of the economy than households with a male partner in residence (see Bolles, 1985). These issues have consequences for women's health, particularly for women's mental health (Alves *et al.*, 1992). The association between urbanisation and mental ill-health is now widely acknowledged (Almeido-Filho *et al.*, 1995; Cheng *et al.*, 1995; Harpham, 1995). The WHO (1991) has stated that mental health deserves particular attention and action in the 1990s and the 21st century because modern trends such as urbanisation are likely to increase the extent of the problem (Alves *et al.*, 1992). Blue and Harpham (1994)

emphasize that The World Bank World Development Report (1993) for the first time focused on health and reports that neuropsychiatric disorders, particularly depression account for 5.7% of the total burden of disease for women in the developing world and rank fifth in this respect.

Walters (1993) reports that in a stratified random sample of 356 Canadian women, it was seen that women experienced mental health problems differently depending on their socio-economic status, ethnicity, family structure, the quality of family relationships and the nature of their participation in the labour market. Several studies in developing countries have also suggested associations between the mental ill-health (psycho-social distress) of poor women and factors such as migration, marital status and occupation (Harpham, 1992; Sugar *et al.*, 1991; Rabelo *et al.*, 1995; Blue *et al.*, 1995).

As Reichenheim and Harpham (1991) quote, two specific components are of particular importance in mental health :

a) major difficulties such as low-income, poor housing, over-crowding and high parity, lack of security of tenure etc. (Brown, 1979); and
b) the absence of support provided by social relationships and the internal dynamics of the family group, where lack of intimate ties with spouse is explicit (Henderson, 1980).

Thus in planning and delivering services in cities we must deal with a complex variety of interacting stressors that affect the population. Urban communities tend to be

anonymous, people often do not know their neighbours as they might in a small town and extended families are rare. Because of their size urban communities also tend to be places where formal human services are centred. Cities are also often progressive and somewhat experimental in orientation and thus are able to provide alternatives for the sociological functions that exist in more traditional form in rural places (Bachrach 1992).Thus cities often contain self-help groups and supportive caring networks that are developed specifically for the purpose of assisting people who have special problems and they frequently take over some of the functions that are traditionally associated with family support (Bachrach, 1992). However as discussed in 2.3.1 the low-income populations do not have access to these supports due to financial (fees for entry) social, political and legal (lack of recognised housing, stigmatization and political polarization) barriers.

Recognising the importance of social support, there has been a growing interest in the effects of social support on health as clearly demonstrated by the rapidly growing body of literature on the subject in the past decade (Bloom, 1990). Various researchers have studied problems ranging from finding a job, to keeping a handicapped child, to have an effect on treatment regimes of various diseases (Cobb, 1979; Cohen, 1988; Sanches-Ayendez, 1988; Stewart, 1989; Villar *et al.*, 1992; Isaksson *et al.*, 1992; Bahar *et al.*, 1992; Pugliesi, 1988; Langer *et al.*, 1993; Umberson, 1992; Franks *et al.*, 1992; Cooper and Paykel 1992; Pearson and Chan 1993; Vilhjalmsson, 1993; Turner and Marino, 1994).

Various definitions have been provided by researchers for social support but most are unsatisfactory as they either do not define the key terms, or they include only certain components of support (Cooper and Paykel, 1992; Coyne and Downey, 1991; Aro *et al.*, 1989; Paulsen and Shaver, 1991; Glass and Madox, 1992). Cobb (1976) defines social support as "information leading the subject to believe : 1) that he is cared for and loved; 2) is esteemed and valued; and 3) belongs to a social network of communication and mutual obligation". This definition focuses on emotional support only and fails to elaborate the terms used in the definition. Cobb (1979) offers descriptions of other kinds of support which include: instrumental support; and active support and material support

House (1981) suggests that social support is an interpersonal transaction involving one or more of the following support : 1) emotional (like love, empathy); 2) instrumental aid (goods or services); 3) information (about the environment); and 4) appraisal (information relevant to self-evaluation). This is a more comprehensive definition capable of being operationalised for the purpose of measurement. Thoits (1985) suggests that the definition refers to helpful functions performed for an individual by significant others such as family members, friends, co-workers, relatives and neighbours. The functions of the above social support may include :

-psycho-emotional aid such as demonstration of love, caring, esteem, value, empathy, sympathy and or group belonging;

-instrumental aid such as actions and materials that enable fulfilment of everyday responsibilities and obligations; and

-informational aid which refers to communications such as advice, personal feedback and job information.

Though there is debate on the definition of social support there is consensus that it is a multidimensional concept. It is also agreed that the various functions of social support may asses either the subjective perception of the support received or denied and the objective presence and availability of such aid and its utilisation (Cooper & Paykel 1992). Social support maybe confounded with the occurrence of life events (where life events maybe seen as losses & gains of social support such as divorce, death of spouse or marriage). These events may not be conceptually distinct from social support changes which may simply be a reflection of prior life events. Furthermore events may themselves provoke further changes in social support (Cooper and Paykel, 1992). Social support has also been the subject for debate in whether it directly influences subsequent disorder (Thoits, 1985) or whether it does so indirectly by acting as a buffer (Langer *et al.*, 1993; Aro *et al.*, 1989; Paulsen and Shaver 1991; Bloom, 1990; Glass and Maddox, 1992; Franks *et al.*, 1992).

The confounding of social support with life events further complicates this issue. In recent years stress theorists have paid considerable attention to the impact of social relationships on mental health. Numerous studies have shown that an association exists between the two, but there is controversy about the place of social relationships in the causal chain (Aro *et al.*, 1989). Although during the last two decades the concept of social support has enjoyed the attention of social and behavioural scientists to a greater extent than any other psycho-social variable and there is little doubt that an association exists between social interactions and morbidity (Bloom, 1990) the nature of this

association and the mechanisms through which it operates are still much debated. Questions are being asked about the usefulness of the concept. Coyne and Bolger (1990) have argued, for example, that the literature on social support rests on untenable assumptions. Pearlin (1989) has stated that to the extent the study of social support is separated from the institutional and networks contexts in which it exists, the concept lacks 'sociological substance'.

Thus the next step as many investigators agree must be to explore the mechanisms through which social contacts exert an influence on health status (Glass and Maddox, 1992). As Sanchez-Ayendez (1988, pg. 251) sums up, the type of support given or received, the way in which it is offered, the persons involved and occasions in which it is provided needs to be understood within the context of the meaning of interpersonal relationships. Further understanding the cultural context in which supportive behaviour occurs expands the understanding of the concept and of the reasons why support networks are kept or altered.

In the above section it was demonstrated that urbanisation has produced major transformations in Third World countries which have been significant for women's health, especially women's mental health. The association between mental ill-health of poor women and factors such as migration, marital status and occupation are widely recognised today. Also there has been a growing interest in the effects of social support and networks on health especially in urban areas which are marked by anonymity and the lack of established social supports such as the extended family. Various aspects of social support perceived as important in coping with various

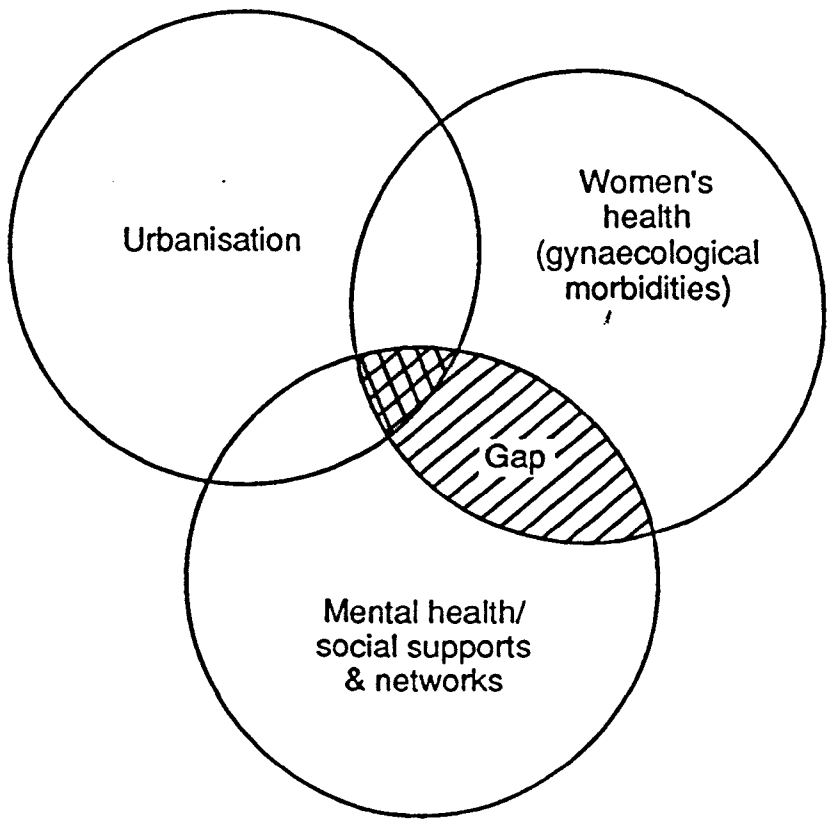
problems, such as emotional, instrumental, informational and appraisal support are discussed. Researchers agree that social support is a multidimensional concept and it may assess subjective perception or objective presence of support. Further the debate on confounding of social support with life events is discussed and also the question of whether social support directly influences subsequent disorders or indirectly acts as a buffer are presented. The importance of social networks in coping with health problems is recognised, especially the importance of social relationships on mental health. Finally it is argued that though the concept of social support is widely recognised as also the association between social support and health/morbidity the nature of this association and its process (the mechanism through which social contacts exert an influence on health status) needs to be explored. The emic perspective adopted in the current study would help in providing this insight.

1.2.3.3 Gynaecological morbidity and mental health and social support and networks - the missing link

In the previous sections three issues have been discussed - women's health; urbanisation; and mental health. It can be argued that urbanisation affects women's health, especially mental health. It has been shown that during the last decade there has been an increasing concern in women's reproductive health, women's mental health, urbanisation, and social support, as evidenced by the growing literature in these fields. The major transformations taking place in the Third World have focused special attention on these issues. However, inspite of a growing interest in these areas in developing countries and the interest in women's gynaecological morbidity as distinct

Figure 1.1

The link between womens' gynaecological morbidity conditions, urbanisation and mental health/social supports



from reproductive morbidity, the crucial link (demonstrated in figure 1.1) between gynaecological morbidity, women's mental health and social supports and networks has not been explored to date. The current study seeks to address this link. In order to address this link/gap a particular conceptual framework is needed. The next section provides this framework.

1.3 CONCEPTUAL FRAMEWORK

The following section describes the various concepts which form the framework of the current study. The concept of gynaecological and related morbidity conditions is explained from an emic perspective where the concept of illness versus disease and society's construction of ill-health are discussed as basic to the understanding of women's perspective of gynaecological morbidity. This is followed by a discussion on the importance of women's reporting of morbidity conditions vis a vis medical examinations and laboratory tests. Health as a multidimensional process to be viewed from a holistic perspective rather than from the medical model of health is next presented. Finally the coverage of the concept of gynaecological morbidity as derived from cross-sectional questionnaire based studies in low income populations in developing countries is described.

1.3.1 Gynaecological morbidity from an emic perspective

1.3.1.1 Concept of gynaecological morbidity

Various conceptualisations of reproductive health (Germain, 1987; Fathalla, 1988; Zurayk, 1988) consider reproductive morbidity as inclusive of conditions of physical ill health related to 'successful childbearing' and freedom from gynaecological disease and risk. In line with this conceptualisation Zurayk *et al.*, (1993) have defined reproductive morbidity to encompass obstetric morbidity including conditions during pregnancy, delivery and the post-partum period and gynaecological morbidity including conditions of the reproductive tract not associated with a particular pregnancy such as reproductive tract infections, cervical cell changes, prolapse and infertility. In addition an interest in reproductive morbidity is also considered to encompass related morbidity including such conditions as urinary tract infections, anaemia, high blood pressure, obesity and syphilis as a systemic condition.

However as the present study seeks to understand women's health not in the context of the 'M' in 'MCH' (Maternal and child health-Safe Motherhood Programme, WHO 1990), nor solely from the context of the bio-medical model. Women's gynaecological health is considered here as outside or between the pregnancy episodes and from the perspective of the holistic model of health which considers social, cultural, economic and psychological factors of health besides the biological ones. Thus for the purpose of this study, gynaecological morbidity is defined as:

those reproductive and related morbidity conditions experienced by women outside and between pregnancy outcomes and not related to a particular pregnancy .

Thus gynaecological morbidity such as reproductive tract infections (RTIs), prolapse, infertility, menstrual disorders and related morbidity conditions such as urinary tract infections (UTI), infections related to abortion and insertion of intra-uterine device (IUD), commonly reported by Indian women and women in the developing world as outlined in the various studies summarised in tables 1.1, 1.2 and table 1.3, would be encompassed in this definition.

1.3.1.2 Bio-medical versus the holistic view of health

The framework of this definition is based not on the bio-medical model of health as is seen in the community and some of the hospital based studies summarised in tables 1 & 2 (Bang *et al.*, 1989; Bhattacharya, 1991; Luthra *et al.*, 1992) which seek to clinically validate womens' reporting of symptoms through medical examinations and laboratory tests, but according to the holistic perspective (Heggenhoughen, 1991) which views health as a multidimensional process and takes into account the social, cultural, political, economic and psychological aspects of health besides the biological ones (Park, 1970).

Relying solely on the bio-medical approach to study women's health at the community level to guide policy formation is questionable (as in the case of the Bang et al. 1989 study and the Reproductive Morbidity Interdisciplinary Research Group, 1991 study).

Health has several meanings (Park, 1970), only one of which is represented from the bio-medical approach. The multiplicity of meanings of health needs to be recognised for achieving an analytic understanding of the process of production of health as a basis for any realistic and comprehensive effort to improve health conditions in the community. In fact this is the guiding light behind the applied human sciences such as psychiatry and medical social work where 'history taking' on the basis of biological, cultural, economic, social and psychological factors as they affect health, forms the main criteria for diagnosis and assessment for further treatment.

From the perspective of the individual, two categories of meaning are differentiated as expressed in the concepts of **disease and illness** (Frankenberg, 1980; Young, 1982). Historically the concept of disease has been the most dominant category. It has a biological interpretation and refers to abnormalities in the structure or function of organs and organ systems; the pathological states whether or not they are culturally recognised (Young, 1982:264). This meaning of ill-health underlies the bio-medical model.

1.3.1.3 Concept of perceived gynaecological morbidity

1.3.1.3.1 Meaning of illness

Health as a felt experience of the individual provides meaning which is embodied by the term illness. Thus illness is the meaning that individuals give to health and refers to a person's perceptions and experiences of certain socially disvalued states, including

but not limited to disease (Young, 1982:265). Illness is the individual's consciousness that there is something wrong (Frankenberg, 1980:199). In this study, illness is referred to as the **individuals' perceived morbidity** which is referred to as 'reported morbidity' for purposes of simplicity. The framework of this study rests on the concept of reported morbidity wherein questions are directed to women asking them to specify the nature of health problems they suffer from and to indicate what they consider are dangerous symptoms in terms of their gynaecological health. Womens' perceived or reported morbidity is rich in meaning and capturing it requires a more qualitative methodology than has been employed by any of the morbidity studies to date.

1.3.1.3.2 Society's construction of ill-health

As realised in retrospect by the Reproductive Interdisciplinary Research Group (1991) the significance of the concept of perceived reproductive morbidity represents an important realm for policy concerns for the following reasons:

- Firstly as womens' health behaviour particularly in seeking health care is governed by what women perceive as ill health/ morbidity, whether this perception is consistent with medical symptoms or not.
- Secondly, learning about morbidity as perceived by women brings to attention what worries women about their health based on criteria of seriousness such as discomfort, or interference with their daily routines or with their feeling of dignity (Ozbay, 1989).

Such emphasis contrasts with what the medical profession considers as serious which are mostly fatal diseases forming only the tip of the ice-berg. For example the Reproductive Interdisciplinary Research Group (1991) found that prolapse of the uterus was present in a large proportion of the women (56%) and was reported by them as creating great discomfort. However the medical professionals in the team did not give the problem priority as it was not considered fatal nor medically 'correctable', even though the presence of the problem inhibited women's daily lives and also increased their risk of contracting RTIs by four times as compared to other women. The Reproductive Interdisciplinary Research Group (1991) summarizes that taking account of women's perceptions/reported morbidity ''could lead to more balance in the process of delineation of policy priorities between the rare and the fatal on the one hand and the common and disturbing to women on the other.''(pg. 29). In dealing with the concept of perceived morbidity, the role of psycho-cultural factors becomes apparent, not only as determinants of the occurrence of ill-health but also as essential in the construction of ill health. In fact the important role of psycho-cultural factors goes beyond individuals to act on society's construction of ill-health; through its determination of the breakpoints marking degrees of good health on the health-illness continuum representing health status. As such, these breakpoints are mostly 'culturally negotiated'. They are determined in order to ensure attention to problems considered in that culture. Moreover they take into account the power structure in the community. particularly in marking incapacitating ill health in order to ensure the needed level of human resources for that society within the dominant work organisation patterns (Johansson, 1991).

This emphasis on society's cultural construction of ill health is particularly relevant for understanding women's perception of ill health in poor communities in the developing world. For women in a low power position, such as a young woman living with her mother-in-law, the load of work expected in the field, at home and in the rearing of children is so heavy that it puts the threshold of illness recognised by society very high on the health-illness continuum in order to ensure her availability to undertake these chores (Bourquia, 1990). The researcher's observations in the field and during the course of conducting two micro studies in urban slums have shown that such women will endure a lot of pain and discomfort before they admit to a state of illness. In contrast, any symptom suggestive of problems with the socially sanctioned function of child bearing, such as disturbances in the menstrual cycle for example would be exaggerated (Mane, 1993; Zurayk *et al.*, 1993) and a great source of worry deserving of the label of reproductive illness.

This framework developed by the Giza group (Reproductive Interdisciplinary Research Group) (adapted for the current study) along with the 'emic' perspective (given below), yields a broad framework within which to study the impact of gynaecological and related morbidity conditions in low-income urban women in the developing world.

1.3.1.4 Emic and etic approaches

As Pelto and Pelto, (forthcoming), Weiss *et al.*, (1992) and Bentley *et al.*, (1990) quote Headland *et al.*, (1990) the concept of "health culture"(that all groups and communities have systems of cultural beliefs concerning the illness and the ranges of

expected appropriate treatments of illness) gives rise to the basic methodological premise that in practically all situations it is useful that data be collected in a manner to produce information from the perspective of the local population and in their own cultural terms. Thus data that reflect a people's cultural perspective and conceptual categories for health and illness in terms of their own language and conceptual framework are referred to as 'emic' data. Information that is collected or extracted using the terminology, classificational system and assumptions of the researchers as "outsiders" to the given cultural context is 'etic' data.

Thus for the current research a study of local concepts of health and illness among low-income urban women reporting gynaecological morbidity, for whom these concepts are meaningful is emic and the health providers employing cosmopolitan treatment is etic. Emic data provides information on the informants' own vocabularies, their own views of interrelationships and classifications, and their own perspectives on sensitive issues.

In every cultural group the domain of "illness and ailments" is organised into some sort of classification with particular labelled illnesses recognised or identified in terms of a constellation of systems and signs thought to be characteristic of the particular illness. For each "illness" there are causal explanations as well as some patterned expectations concerning ways that illness can be treated. These constellations of more or less systematic cultural beliefs concerning a specific illness can be referred to as the explanatory model of that ailment (Pelto and Pelto - forthcoming).

As Kleinman (1980) says, the explanatory model (EM) is a useful way of looking at the process by which illness is patterned, interpreted and treated. He further asserts that EMs "offer explanations of sickness and treatment to guide choices among available therapies and therapists and cast personal and social meaning on the experience of illness". Explanatory models provide explanations for five aspects of illness :

-the aetiology of the condition;

-the timing and mode of onset of symptoms;

-the pathophysiological processes involved;

-the natural history and severity of illness; and

-the appropriate treatments for the conditions.

EMs are used by individuals to explain, organise and manage particular episodes of impaired well-being and can only be fully understood by examining the context in which they are employed, as this usually has a major influence upon them.

The context may include the social and economic organisation, the dominant ideology of the society in which they become ill and consult a doctor. For example women's status in a particular society as reflected in nutrition intake or mobility outside the house or decision making in the house or in relation to children or their own health.

The emic view of gynaecological morbidity as seen in the construction of the explanatory model rooted in the local cultural concepts and reflecting the way the women think about their world, themselves and health and health problems (gynaecological morbidities) would provide more realistic treatment procedures and preventive strategies for gynaecological and associated morbidities.

1.3.2 Coverage of the concept of gynaecological morbidity

In reviewing the cross-sectional studies on reproductive morbidity in developing countries, which used the questionnaire method (table 1.3, adapted from Campbell and Graham, 1993) to record womens' perceived/self reported morbidity, it is seen that various morbidity conditions have been probed in these studies. The nine studies quoted in table 1.3 are all cross-sectional studies from developing countries which have sought to elicit morbidity conditions in women through the questionnaire method (as one of the tools of data collection). Almost all the studies have been conducted in the last decade after the interest in womens' health was initiated as a result of the UN decade for women. From table 1.3 it is seen that the most frequently probed morbidities are - menstrual problems, vaginal discharge, urinary problems and infertility, followed by prolapse, abdominal pain and problems with intercourse in that order. The above conditions have also been widely reported by women from poor urban and rural communities in India as seen in the summary of community studies in table 1.1.

Thus in selecting gynaecological and related morbidity conditions for probing through the questionnaire method in low-income urban women, for the current study it is assumed that the above mentioned gynaecological conditions are'safe' to probe. Among the 'related morbidity conditions' urinary problems have been included as they have been frequently probed and reported in the studies reported in table 1.4. Abortion and IUD related infections have also been included in the current study because of

TABLE 1.3: WOMEN'S MORBIDITY INFORMATION OBTAINED IN NINE CROSS-SECTIONAL STUDIES IN DEVELOPING COUNTRIES

	Bang et al. (1989)	Taylor et al. (1985)	Liljestrand (1985)	Chamratrithi et al. (1987)	Wasserheit et al. (1989)	WHO (Omran & Standly 1976; 1981)	Reproductive Morbidity Interdisciplinary Research Group (1991)	MCEH, report on Pakistan (1992)	MCEH, questionnaire on Matlab study
Menstrual problems	*	*			*	*	*	*	*
Vaginal discharge					*	*	*	*	*
Abdominal pain									
Itching						*			
Prolapse						*	*	*	
Urinary problems	*	*						*	*
Infertility	*						*	*	*
Problems with intercourse							*	*	*
Other health problems		*		*					

Source : adapted from Campbell and Graham (draft, 1993)

purposes of simplicity,their association with menstrual problems in reporting of infection. In the current study, the term gynaecological and related morbidity conditions will be referred to as gynaecological morbidity only.

Table 1.4 lists the conditions that have been selected to probe gynaecological and related morbidity conditions in the current study.

Table 1.4: List of Gynaecological and related morbidity conditions to be probed in the current study

Gynaecological morbidity

1) Menstrual problems
2) Reproductive tract infections
   (characterised by vaginal discharge and lower abdominal pain)
   -lower
   -upper
3) Prolapse
4) Infertility
5) Problems with intercourse

Related morbidity

6) Urinary problems
7) Abortion and sterilisation related infection
8) IUD related infection

Among the gynaecological health conditions, emphasis has been on RTIs because of the dangerous sequelae resulting from them and the consequential impact on the women (Wasserheit and Holmes, 1992; Dixon-Mueller and Wasserheit, 1991). This is clearly seen when women develop severe abdominal pain and profuse vaginal

discharge as a consequence of normally recurrent infection in the absence of treatment. RTIs include lower reproductive tract infections occurring in the vagina and cervix and upper reproductive tract infections also called Pelvic Inflammatory Disease (PID) occurring in the uterus, tubes and ovaries. The major symptoms for lower RTIs are discharge and genital ulcerations and for upper RTIs - discharge and lower abdominal pain (Zurayk *et al.*, 1993).

In this last section the various concepts which form the framework for the current study have been presented and then the operational definition of gynaecological and related morbidity conditions was derived based on the definition of reproductive morbidity used in earlier studies and as relevant for the current study. The next chapter describes the objectives of the study and the methods and tools used to study the proposed objectives.

CHAPTER 2: RESEARCH QUESTIONS AND METHODS

This chapter outlines the study research questions, debates methods and explains the data management process. The first section touches on research questions (along with their justification) and the second section presents operational definitions of the key terms. Triangulation of methods is then discussed and details of the methods used in this study are described. Finally the study design and data processing procedures are presented.

2.1 RESEARCH QUESTIONS AND JUSTIFICATION

2.1.1 General Question

How do low income urban women experience gynaecological morbidity ? What is its association with mental health, social support and social networks ?

2.1.2 Specific Questions

1) What is women's emic perspective of reported gynaecological morbidity ?

There are no studies of gynaecological morbidity from the emic perspective (sections 2.1, 2.2 and 2.3). The emic perspective is important in studying women's gynaecological and related morbidity conditions as it helps health providers and policy makers to obtain the women's world view of their gynaecological morbidity in the

context of their social, cultural, economic and political reality and also the illness experience of the women.

2) Do women who have gynaecological symptoms have more mental ill-health than women who do not have gynaecological symptoms?

It is now recognised that urbanisation has produced and continues to produce major transformations in Third World societies (especially in low-income groups). These changes are critical for women's health and, in particular women's mental health. An original focus here is to examine the association between gynaecological morbidity and mental health in a low-income urban setting in the developing world.

3) What is the role of social support and networks in women's experience of gynaecological symptoms and mental health ?

In the face of social stigma and taboo related to women's gynaecological conditions and the breakdown/absence of traditional systems of help due to migration to the city, how do women from low-income groups cope with perceived gynaecological morbidity ? What are the social support and networks available/used by them to cope with such morbidity ? Does this affect levels of reported gynaecological morbidity and mental health ?

2.2 SETTING

To the North-East of Bombay lies Thane, viewed as a suburb of Greater Bombay as most of the residents work in Bombay and reside in Thane. Figure 2.1 shows the location of Thane metropolis to the north-east of Greater Bombay. Thane city has a population of about 3 million people (Census of India, 1991) of whom approximately 50 percent are slum (zhopadpatti, where zhopada refers to a semi-pucca construction) dwellers. The Thane Municipal Corporation health department caters to the health needs of the city through one large municipal hospital, a small civil hospital in the centre of the city and eleven urban health posts. The hospitals provide primarily curative care, through out patient departments (OPDs) and inpatient services. The health posts cater to the preventive, promotive and curative health needs of the people residing in the zhopadpattis through outreach services and health clinics. The eleven health posts and the population they cover are shown in table 2.1.

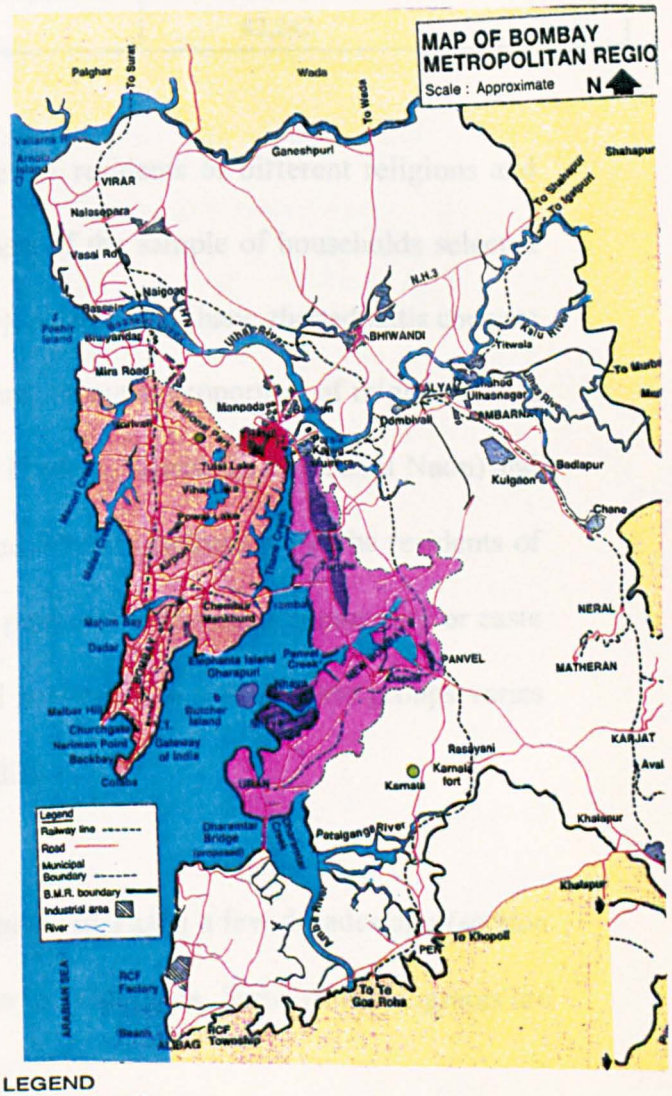
In total there are 11 groups of zhopadpattis located in various parts of the city. The working assumption of the local health post is that each of these 11 group of zhopadpattis has approximately between 22,000 to 100,000 residents. The zhopadpatti residents are mainly migrants from rural Maharashtra and other states of India such as Uttar Pradesh, Karnataka, Tamil Nadu, Andhra Pradesh, Kerala and Bihar (section 3.1.1.1).

Figure 2.1

LOCATION OF BOMBAY WITH RESPECT TO INDIA

BOMBAY ●

LOCATION OF THANE WITH RESPECT TO BOMBA



LEGEND

THANE

TABLE 2.1: POPULATION IN URBAN HEALTH POSTS IN THANE

Health Post	Population
Kisan Nagar	98,470
Shivaji Nagar	73,577
Vartak Nagar	54,768
Balkum (t) *	48,739
Manpada (t) *	38,727
Kalwa	70,437
Kopri	62,731
Mumbra (t) *	61,186
Sheel (t) *	36,331
Wadia	56,443
Uthalsar	49,539
Ayurvedic	21,341
Naupada	82,242

* t = Tribal population

Thus each zhopadpatti/community comprises of residents of different religions and languages. If an estimate is made on the basis of the sample of households selected for this study (section 3.1 of the next chapter), each of the Thane zhopadpattis consists of a large proportion (60%) of Maharashtrians, an equal proportion of migrants from Gujarat, Uttar Pradesh, South India (Andhra Pradesh, Karnataka and Tamil Nadu) and a smaller proportion of Nepalis, Bengalis and Wadaris (adivasis). As the residents of the zhopadpattis come from different states, people of a particular community or caste or language tend to reside together in small pockets. The size of these groups varies from a few families to a few hundred families.

Some of the migrants moved to the zhopadpattis in Thane a few decades ago (section 3.1.1.4) while others have arrived within the last few years. Some of the migrants are

employed (3.1.1.3) in the formal sector such as the local corporation, mills, private industries (which are expanding due to saturation in neighbouring Bombay). Others are employed in the informal sector - from small self employed ventures to construction work, rag picking and domestic work. More than 65% of the respondents and their families are recent migrants either from other states of India or from rural areas of the home state Maharashtra. Most of the respondents and their families live in rented houses. All the three slums in the study community have houses with walls constructed partly or completely of bricks and sloping roofs made of asbestos sheets or mangalore tiles (serrated brick tiles).

Some of the poorer houses have walls which are part brick and part tin/sacking/plastic sheets. The floor is either tiled or made of earth/mud. All the houses are constructed very close together with each house being built onto the wall of the next, that is the middle wall is shared (common) between two adjoining houses (figure 2.2). The houses in all the three zhopadpattis are very closely spaced, but the most heavily congested is Kailashnagar which is also the oldest of the zhopadpattis. As can be seen in figure 2.3, the house of one of the key informants which was used as a base by the research team, each of the houses comprises normally of one large room with the kitchen and washing area at one end and the remaining part of the room being used for sitting, sleeping and working. Normally 4-6 people live in one such house. Each of the zhopadpattis has a few corner stores which sell household items from cereals, pulses, sugar to biscuits, boiled sweets, soaps, detergents, brooms etc. as seen in figure 2.4.

FIGURE 2.2 Figure of an alley in the study community showing the closely built houses in the area

FIGURE 2.3 A Key Informants house

Most of these stores are managed by local residents with the store functioning in the room facing the street and the residential part comprising the inner part of the house (marked by the curtained door in figure 2.4). Besides corner stores, launderettes and tobacconists, private health practitioners of allopathic, homeopathic and ayurvedic systems are also present in the zhopadpatti. One of the zhopadpattis has a voluntary organisation which operates various services such as a creche for working mothers, play school for pre-schoolers, sewing class, a woman's group, immunisation and other health services for children and gynaecological check-ups for women. Figure 2.5 shows a sewing class in operation in the centre.

FIGURE 2.4 Figure showing a corner store in the community

Community wells, taps and hand pumps are the sources of drinking water in the community. Taps provided by the municipal corporation at a few points in each slum are the main source of drinking water. The water is released in these taps only for a few hours everyday either early in the morning or late at night. The women have to queue for several hours everyday to collect water for daily needs of the household and their lives are planned around the availability of the water and consequent completion of household tasks. Well water where it is available is used for bathing and washing as seen in figure 2.6. Sanitation in all the three zhopadpattis is through open drains which collect water from each house (figure 2.7) and finally empty out into nearby wastelands or open grounds.

FIGURE 2.5 Figure of the voluntary organisation in the community showing an activity in progress

FIGURE 2.6 Figure shows a water well in one of the zhopadpattis

FIGURE 2.7 Figure shows an open drain in front of the entrance to houses in the community

2.3 METHODS

2.3.1 Triangulation of methods

Several workers and researchers (Jick, 1983; Rubenstein, 1984; Mechanic, 1989; Heggenhoughen and Clements, 1987; Steckler *et al.*, 1992; Brabin, 1992; Campbell and Graham, 1990; Zurayk *et al.*, 1993; Yach, 1992; Bernard, 1988; Debus, 1986) have argued that combining methodological approaches is of great importance for social research, particularly in the design of interventions.

Bernard (1988) argues that both ethnography and survey research have their strengths and weaknesses. In arguing for ethnography he says

> " you can't describe an event, such as a wedding or a political demonstration with survey research and you have almost no control over informants lying to you in survey research....."(page 145-146).

Scrimshaw and Hurtado (1978) also recognise that ethnographic research is far superior to survey research when it comes to describing processes such as local customs and beliefs relating to notions of pollution during menstruation or on being widowed. Thus ethnography and other in-depth methods score well for **internal validity** (when a true measure of the variable is obtained for the subjects under study).

However, **reliability** (the constancy of the findings), **external validity** (generalizability of the findings to a wider population) and understanding of intra-cultural variation can be increased by using survey research techniques (Bernard, 1988).

Combining research techniques within a single project, also referred to as "triangulation" (using a range of methods, types of information, investigators &/or disciplines to cross-check (Chambers, 1992; Jick, 1983; Heggenhoughen and Clements, 1987; Mwenesi, 1993; Debus, 1986)), has the benefit of strengthening any inherent weakness in any one technique when used on its own. It also enables the sharpening, verification, clarification and wider interpretation of the data which may lead to a more complete understanding of the phenomenon under study. For instance, structured questionnaire interviews used in surveys, are useful for gathering information on given characteristics in a population and creating statistical profiles; useful for generalizing findings. However depending on the issues under assessment, representativeness may be irrelevant (Nio *et al.*, 1991). As Sugar *et al.*, (1991) argue

> "there are local realities with specific historically shaped patterns of health change;....to understand the outcomes, their sources and the mediating processes, the focus of analysis must be local worlds of experience in regions and cities, not the aggregated level of the nation, state or continent....."(page 217).

The current study employed a combination of quantitative and qualitative methods to achieve the proposed objectives:

1) quantitative or survey research methods where a structured interview schedule was used to collect data on gynaecological morbidity, social support and networks, mental ill-health and socio-demographic features such as age, parity, educational status, ethnicity, occupation and migration status, which may have consequences on women's gynaecological morbidity. By the use of quantitative methods the researcher sought to understand the impact of gynaecological morbidity conditions on the women's mental health as well as the social support and networks available/used by them to cope with the conditions.

2) unstructured in-depth interviews were used to gather qualitative data. This method allows for a deeper understanding of the women's perceptions, the meanings given by them to their morbidity experiences within the context of their social world and the customs and traditions which govern it (emic perspective). Rapid assessment procedures (RAP) such as free listing of morbidities, ranking, pile sorting and body mapping were also employed during the in-depth interviews to learn about local terms as well as cultural meanings given to illness by the women.

2.3.2 Development of research instruments and selection of field staff

The draft of the survey questionnaire and question guideline for the in-depth interviews were prepared before leaving for field work. In Thane, the researcher

discussed the questionnaire and the guidelines informally with local health providers and staff of the local voluntary organisation as well as women leaders in the community. This was done to ensure that the questions were culturally relevant and acceptable as well as to pick up local terms for gynaecological morbidity and social support to try and understand traditional terms and concepts regarding gynaecological morbidity in the study area, before translating the questionnaire and guidelines for pilot tests in the community.The instruments underwent minor revisions based on this exercise. The development of each section of the survey questionnaire and the guidelines for the in-depth interviews is described under each appropriate section below.

The questionnaire and the guidelines were pilot tested in the study area after translation into Hindi and Marathi - the two local languages spoken and understood by almost all the slum residents. The researcher is conversant with both languages. The pilot tests helped in refining the design, wording and order of questions in the questionnaire and guidelines, establishing codes for most possible responses, and in deciding that the questionnaire would be administered in one visit. It was during the pilot test too that it was decided to use cards with names or pictures of the different gynaecological morbidity to assist women in pile sorting. The questionnaire and guidelines were translated into Hindi and Marathi and then back-translated into English to identify any idiosyncrasies in the interpretations. The questionnaire and guidelines were also translated by two different translators to check for interpretation errors.

The Thane health department, the staff of the local health post and the staff of the voluntary organisation which functioned in the study area were all appraised of the study objectives and study design. Informal discussions were also held with community leaders (older women in the community and women's group leaders) where the study objectives and the study design was explained in detail. Questions about reason for selection of study topic and eligibility criteria for inclusion were answered.

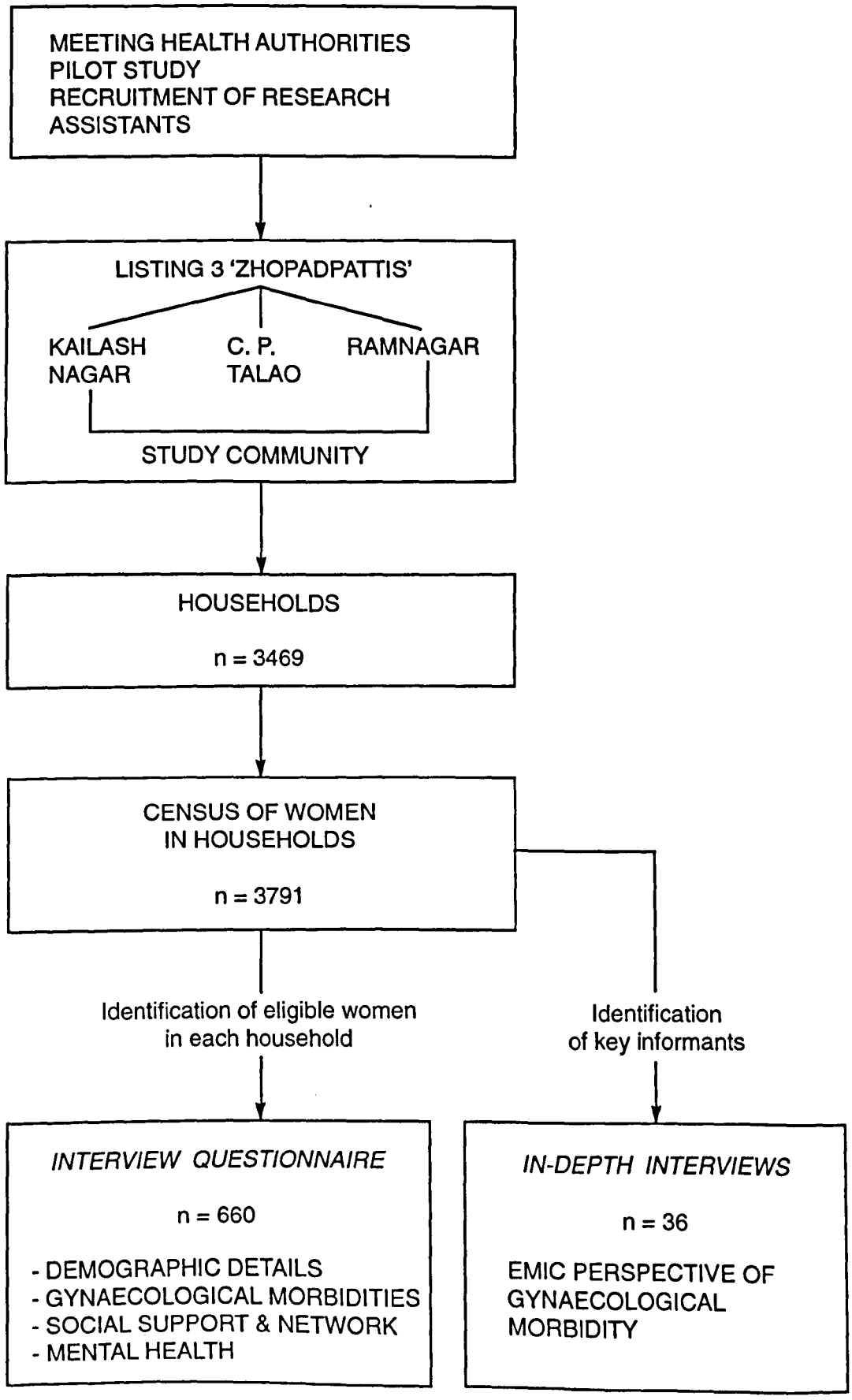
The study area residents were assured of the confidentiality of the whole research process. The study design, sample size and time available for data collection necessitated the appointment of research assistants to assist in data collection. The posts were advertised in two social science institutes. Three women post-graduate social scientists, fluent in Hindi and Marathi, with previous research experience and interest in women's issues were finally selected. Two of the assistants resided in Thane, whilst one stayed within 30 minutes commuting distance of Thane. All three were familiar with low-income urban groups as they were born in Bombay or Thane.

The training of the three research assistants was conducted over two weeks. During the first week they were familiarised with the study objectives, the study design and the questionnaire. During this period they were also briefed on women's issues especially in health and in low-income urban groups. This was felt necessary to generate confidence in them to answer questions raised by community people or respondents during the data collection phase. During the second week the research assistants (RAs) were taken to the study area and introduced to local authorities and

community people. Pilot testing of the questionnaire was initially jointly done with the researcher to train the RAs in method of introducing the topic, addressing sensitive questions on gynaecological morbidity and the method of coding the answers on the questionnaire. This exercise was reversed with each RA. That is at the second stage the RA conducted the interviews in the presence of the researcher, to identify and correct any individual idiosyncrasy/bias in administering the questionnaire. The training was on-going with the pilot testing of the instruments. Figure 2.8 gives the summary of field events.

Figure 2.8

SUMMARY OF FIELD EVENTS



2.3.3 Measuring reported gynaecological morbidity

Women residing in the selected community (see section 2.4.3.1), ever married, in the reproductive age group of 16-45 years, married for at least two years, not currently pregnant, not menopausal and not postpartum amenorrhoeaic, with no history of severe mental illness were eligible for the study. Questions 3-10 in the questionnaire (appendix A) relate to eligibility. Women in the reproductive age group were selected as the study is investigating gynaecological symptoms. Women married for a minimum period of two years were selected as infertility could be identified only in women who had been actively trying to conceive for a minimum period of one year. Women who were currently pregnant, menopausal or postpartum amenorrhoeaic were excluded as certain morbidity conditions/symptoms may be associated with pregnancy (feeling tired all the time, urinary infections), menopause (excessive bleeding, spotting between periods) and postpartum amenorrhoea (no regular periods, excessive bleeding, "feeling something heavy down below"). Women with a history of mental illness were excluded from the sample as it would be difficult to establish an association between gynaecological morbidity and mental health (in cases where the respondent reported gynaecological morbidity) due to prior vulnerability to mental ill health (eg. it would be difficult then to say that women with gynaecological morbidity also reported higher psychiatric morbidity or that most women who did not report gynaecological morbidity also did not report psychiatric morbidity). Women currently undergoing treatment for gynaecological conditions were included in the sample as the factors which helped them to seek and/or continue treatment would be elicited through their experiences.

Ethnic background, migration status, occupation, educational status and income of the women and her husband were measured since different customs, social contacts, and access to information might influence the women's reporting and coping with gynaecological and related morbidity conditions. Questions 11-26 present the section on these background variables in the questionnaire. Questions 27-50 give the symptom questionnaire which was administered to the women meeting the eligibility criteria. This was drawn from the cross-sectional studies reported by Campbell and Graham (draft, 1993) (table 1.4) as discussed in section 3.2.

2.3.4 Operational definitions

Rules for defining gynaecological morbidity conditions

1) Menstrual problems: If the respondent reported yes (2) to either questions 27 or 28 or 29 (appendix A), then she has menstrual problem.

2) Reproductive tract infections: If the respondent reported yes (2) to either questions 30 or 31 or 32 or 33 or 34 (appendix A), then she has reproductive tract infection.

3) Prolapse: If the respondent reported yes (2) to either questions 35 or 36 and 37 (appendix A), then she has prolapse.

4) Infertility: If the respondent reported yes (2) and b) to question 38 and to question 39 (appendix A), then she is infertile.

5) Dyspareunia: If the respondent reported yes (2) to question 40 and 2 to question 41 (appendix A), then she has dyspareunia.

6) Urinary problem: If the respondent reported yes (2) to either question 42 or 43 (appendix A), then she has urinary infection.

7) Abortion morbidity: If the respondent reported yes (2) to question 44 and yes (2) to either question 45 or 46 (appendix A), then she has abortion related morbidity.

8) IUD morbidity: If the respondent reported yes (2) to question 47 and yes (2) to either question 48 or 49 or 50 (appendix A), then she has IUD related morbidity.

Gynaecological morbidity: If the respondent reported any one of the gynaecological morbidity conditions listed above from 1 to 8, this represents caseness or presence of gynaecological morbidity. If the respondent did not report any of the gynaecological morbidity conditions, then this represents non-caseness or absence of gynaecological morbidity.

Psychiatric morbidity: If the sum of the yes answers on the SRQ-20 equals 7 or more, this represents caseness or presence of a psychiatric morbidity. If the sum of the yes answers on the SRQ-20 equals less than 7 (6 or less), this represents non-caseness or absence of a psychiatric morbidity (cross refer to section 2.3.5.3).

Of the women who met the eligibility criteria, two groups, one of women who currently reported at least one gynaecological condition/symptom (group I) (see table 1.3 and cross refer to section 2.2 for rules for defining gynaecological morbidity and caseness and non-caseness) and another of those who did not report gynaecological morbidity (group II) were formed for comparative analysis purpose.

2.3.5 Measuring mental health/psychiatric morbidity

The Self Response Questionnaire 20 (SRQ-20) (Hindi and Marathi versions) was used to assess the mental health of all the women who met the eligibility criteria. Questions 60-79 in the questionnaire at appendix A give the English version and appendices B and C the Hindi and Marathi versions of the SRQ-20, respectively. The SRQ-20 was conceived as a tool for primary health care enabling non-specialised health personnel to identify individuals with mental disorders in community settings for either follow-up or referral. As Reichenheim and Harpham (1991) quote "because women are more likely to develop neurotic disorders such as depressive episodes, anxieties, agrophobias or somatisations (Weissman and Klerman, 1977; Murphy, 1986; Paltiel, 1987) and because anxiety depressive states and psychosomatic disturbances are the most frequent types of mental disorders found in medical practice and in community studies (Goldberg and Blackwell, 1970; Wing *et al.*, 1974; Clement *et al.*, 1980; Mari, 1986) the subject of women's mental health is best studied in the community using a questionnaire which assesses these specific issues" (page 685).

The SRQ-20 was designed by Harding *et al.* (1983) based on former psychiatric instruments. It was validated against in-depth psychiatric questionnaires in Colombia, Sudan, Phillipines and India showing a sensitivity of 73-83% and specificities of 72-85%. Though the SRQ-20 was conceived as a self completion questionnaire, it has been recommended that in countries where the level of literacy is low, indirect application by health workers is more suitable (Reichenheim and Harpham, 1991, quoting Mari, 1986).

2.3.5.1 Validity of the SRQ-20

Face validity The SRQ-20 items were selected from different questionnaires by a team of experts to constitute an item pool (WHO, 1994). In the current study both the Hindi and Marathi versions of the SRQ-20 seem to have face validity as the questions were understood by all the respondents and they readily co-operated in answering them.
Content validity The SRQ-20 has been judged by experts as a scale which appears appropriate for the intended purpose, that is measuring current minor psychiatric morbidities.

The Marathi and Hindi versions had similar responses. The two questions which were consistently misunderstood in the study were question 12 about 'difficulty with decision making' and question 16 on 'feeling worthless'. Due to women's low status in the household, most women leave/or are expected to leave all major decisions to the husband. So almost all women said they had 'difficulty' in making decisions. Further, as most of the women were illiterate or had a minimum education (primary) and most

were not employed for wages, their low status in the household, and consequent inability to participate in family decisions, most reported feeling 'worthless'. Question 18 on 'feeling tired all the time' was also answered in the affirmative by a large proportion of the women. It is possible (researcher's observation) that this is due to the low-income of the sample population and the poor living conditions; and the women's heavy burden of work which is disproportionate to their food intake and rest requirement.

Concurrent validity was measured by using the Diagnostic and Statistics Manual version III - Revised (DSM III-R) check-list, applied by a locally trained psychiatrist as the gold standard. The SRQ-20 was not designed to measure predictive validity as it measures current morbidity. The Hindi version of the questionnaire had been used and validated earlier in different parts of India but the results were not available to the investigator. The Marathi version had to be translated and validated for the present study. Both the Hindi and Marathi versions of the SRQ-20 were validated. Due to constraints such as the absence of a trained psychiatrist in the vicinity of the research community and the difficulty of arranging for psychiatric interviews in the community due to constraints of space and privacy as well as the temporary out-migration of residents to their state of origin, it was necessary to conduct the validation interviews on a similar but different group of respondents attending a hospital out patient clinic.

2.3.5.2 Validity study

The first three eligible women per day for 15 days, reporting to the out-patient department (OPD) of the Preventive and Social Medicine (PSM) department, of a municipal hospital in Bombay (about 20 kms from the study community), meeting the eligibility criteria of age (16-45 years), marital status (married), marriage duration (2 years or more), not currently pregnant, menstruating (not menopausal), not postnatal ammenorhoeaic, with no previous history of mental illness were interviewed. An additional eligibility criterion of family income was also applied to the hospital group in order to control for socio-economic status (<=3000 rupees per month). The patients reporting to the PSM department of municipal hospitals are usually from zhopadpattis. Thus the hospital sample was similar to the women who resided in the study community. A total of 40 women (2-3 per day for 15 working days) meeting the eligibility criteria were interviewed in the validation sample in the hospital.

Women were administered the SRQ-20 by the researcher and the psychiatric assessment was carried out by a senior psychiatrist of the hospital according to the DSM III-R. The psychiatrist and the respondents were blind to the screening and questionnaire results, ensuring the double-blindness of the study. Most of the SRQ-20 interviews were in Marathi (36) and the remaining 4 in Hindi. Table 2.2 compares the characteristics of the community population to the hospital population. As seen in the table there is no significant difference between the income, marital status and occupation of the two groups. Age is significant -but on the borderline. However there is a significant difference in ethnicity, religion and education between the two groups.

This could be explained on the premise that though income, occupation, marital status and age are similar in urban slum populations the religious and ethnic distribution differs (due to geographical pooling) in slums in different parts of the city.

TABLE 2.2: SOCIO DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS IN COMMUNITY AND HOSPITAL BASED VALIDATION STUDY

VARIABLE	ATTRIBUTE	COMMUNITY RESPONDENTS	HOSPITAL RESPONDENTS
ETHINICITY	MAHARASHTRIAN	393 (59.5%)	36 (90.0%)
	OTHER	367 (55.5%)	4 (10.0%) **
RELIGION	HINDU	509 (77.1%)	38 (95.0%)
	OTHER	151 (22.9%)	2 (5.0%) *
INCOME PER CALENDAR MONTH IN RUPEES	MISSING	8 (1.0%)	-
	UP TO 1000	186 (28.0%)	8 (20.0%)
	ABOVE 1000	466 (71.0%)	32 (80.0%)
AGE IN YEARS	16-25	233 (35.2%)	9 (22.5%)
	26-35	336 (51.0%)	22 (55.0%)
	36-45	91 (13.8%)	9 (22.5%)
MARITAL STATUS	CURRENT MARRIED	645 (97.7%)	37 (92.5%)
	WIDOWED/ SEPARATED/ DIVORCED	15 (2.3%)	3 (7.5%)
EDUCATION	NO FORMAL SCHOOL	318 (48.2%)	10 (25.0%)
	BELOW MATRIC	300 (45.4%)	25 (62.5%)
	MATRIC & ABOVE	42 (6.4%)	5 (12.5%) *
OCCUPATION	NONE/ HOUSE WIFE	520 (78.7%)	31 (77.5%)
	PART TIME/ OCCASIONAL	88 (13.3%)	5 (12.5%)
	FULL TIME	52 (8.0%)	4 (10.0%)

Note:- * = $p < 0.001$
** = $p < 0.0001$

The difference in education was expected to some extent as Thane slums (community sample) have a larger proportion of young and first generation migrants (due to growth of new industry in the viscinity -see section 2.2) from the rural areas where educational facilities might not be as accessible as to the older (second, third or fourth generation) migrants living in the Bombay slums (hospital sample). The difference in ethnicity and religion in most of the slums is due to migrants from the same region and religious background preferring to stay near to one another to provide support in the absence of social support and networks in the city. Further, the minority groups (Muslims, Christians, Baudhs) also stay close to their own communities for self-protection. As almost all slums, have this configuration, that is predominance of certain ethnic and religious groups - it is presumed that conditions would be similar in all slums due to these two factors. The lower educational level of the respondents in the study community as versus Bombay (hospital sample) slum respondents would limit the mobility (inability to read bus and train routes) and accessibility of certain services (less ability to manipulate the environment, less skills to work for wages) to the Thane respondents.

2.3.5.3 Calculation of cut-off point

Various studies on the measurement of mental health in developing countries have used the SRQ-20 for the diagnosis of minor psychiatric morbidities. In these studies, the cut-off point between what is normal (non-caseness) and what is abnormal (caseness) is usually based on the sensitivity and specificity figures for that cut-off point. Studies conducted in India in the past have used 7/8, 10/11, and 5/6 (table 2.3)

TABLE 2.3: SENSITIVITY AND SPECIFICITY OF SRQ 20 FOR INDIA

Author/s and Year	City	Purpose of Study	Sample and Setting	Number of SRQ	Cut-off Score/s
Sen (1987)	Calcutta	Analysis of the nature of depressive phenomena in primary health care utilising multivariate statistical techniques.	-202 respondents -Urban population -non and semi literate -low income groups -more than and equal to 15 years	202	7/8 and 11/12
Deshpande et. al. (1989)	New Delhi	Estimation of the prevalence of psychiatric symptoms in a general medical ward.	-350 patients	326	10/11
Harding et. al. (1980)	Raipur Rani	Measurement of frequency of mental disorders among patients presenting at the primary level of health care in developing countries -Assessing diagnostic skills of health workers	-361 primary health care attendants -adults -male:female 1:2	361	5/6

Source : WHO 1994

as the cut-off score to calculate caseness or non-caseness. Further the 7/8 cut-off score has been used most often by studies carried out in the developing countries since 1980 (table 2.4). The corresponding sensitivity and specificity reported for this cut-off score have been relatively high (that is sensitivity above 70% and specificity above 58%).

TABLE 2.4: SENSITIVITY AND SPECIFICITY OF SRQ 20 IN DEVELOPING COUNTRIES

Author/s and Year	Cut-off	Sensitivity	Specificity
Harding *et al.*, (1980)	5-11	73% to 83%	72% to 85%
Dhadphale *et al.*, (1982)	7/8	89.7%	95.2%
Mari and Williams (1985)	7/8	83%	80%
Sen *et al.*, (1987)	11/12	79%	75%
Kortmann and Ten Horn (1988)*	8/9	77% : (psychiatric group) 63% : (Somatic group) 0% : (Control group)	44% 68% 100%
Deshpande *et al.*, (1989)	8/9	62.9%	62%
Penayo *et al.*, (1990)	7/8	81%	58%
Salleh (1990)	5/6	84.8%	83.7%
Araya *et al.*, (1992)	9/10	74%	73%
Carta *et al.*, (1993)**	7/8	90%	70%

Source : WHO, 1994.

*Figures for the total sample are not available. The study was conducted in an outpatient department of a hospital. Patients who are appointed to one of the somatic clinics constitute the "somatic group (n=40); patients referred to the psychiatric clinics constitute the "psychiatric group" (n=30). A sample from the Addis Ababa community is called the "control" group (n=40).

** Based on the SRQ-24.

The researcher calculated the sensitivity and specificity figures for the validity sample (hospital sample) for various cut-off points using firstly the decision matrix advocated by WHO (1994). A sensitivity and specificity of 96% and 60% were obtained using 7/8 as the cut-off point (table 2.5).

2.3.5.4 ROC Analysis

Recently there has been a growing awareness among various researchers (WHO, 1994 quoting Mari and Williams, 1985; Arya, Wynn and Lewis, 1992; and Carta *et al.*, 1993) that the calculation of sensitivity and specificity figures for a single cut-off score is not the most sophisticated way of deciding the cut-off point. A Receiver Operator Curve (ROC) analysis was used by the above authors as they found the graphical presentation to be more useful. Goldberg and Williams (1988) sum the advantages of using a ROC analysis compared with giving a single value for sensitivity and specificity at one cut-off point:

- assessment of the discriminating ability of the instrument across the total spectrum of morbidity;
- comprehensive comparative assessment of the performance of the two or more screening tests;
- assessment of the effect of varying the threshold score (i.e. raising the cut-off point increases sensitivity at the expense of specificity) (WHO, 1994 pg 21).

TABLE 2.5: CALCULATION OF SENSITIVITY AND SPECIFICITY OF THE SRQ 20

Screening Instrument Results	Truth (Criterion Instrument Results)		
	Disorder present	Disorder absent	Total
Positive (Above cut-off)	A (True positives) 24	B (False positives) 6	A + B 30
Negative (Below cut-off)	C (False negatives) 1	D (True negatives) 9	C + D 10
Total	A + C 25	B + D 15	

Prevalence Independent Indices of Validity

Sensitivity = A / (A + C) = 24/25 = 0.96 = 96%

Specificity = D / (B + D) = 9/15 = 0.60 = 60%

Cut-off = 7/8

In order to decide on the most relevant cut-off point, the ROC curve analysis was applied to the hospital sample (n=40). Due to constraints such as the absence of a trained psychiatrist near the research community and the difficulty of arranging for psychiatric interviews in the community due to lack of space and privacy the validation study had to be conducted with the hospital sample. A spreadsheet file/program called the ROC 25.WKS was used to calculate the ROC analysis. The file was accessed through the software program Quattro pro. SRQ-20 responses ranging between 3 and 13 and the corresponding DSM III-R (gold standard) assessments (normal or abnormal) were filled in on the spreadsheet. Then the program was executed and the true positive rates (tpr, where tpr = sensitivity) and the false positive rates (fpr, where 1-fpr = specificity) were calculated for cut-off points ranging between 3/4, 4/5, 5/6, 6/7, 7/8, 8/9, 9/10, 10/11, 11/12 and 12/13 (table 2.6).

As seen in table 2.6 the cut-off points 7/8 and 8/9 have the best sensitivity and specificity figures. For the purpose of this study it was decided to use 7/8 as the cut-off point for calculating caseness and non-caseness for the following reasons:

- the roc analysis shows that the sensitivity and specificity figures for cut-off points 7/8 and 8/9 are 67% and 88% and 67% and 94% respectively
- however, as discussed earlier, literature on the SRQ-20 in India and the developing countries (tables 2.3 and 2.4) has used 7/8 as the cut-off score most often for calculating caseness and non-caseness. As the difference in specificity in the two cut-off points is not high and the sensitivity is the same for both the cut-off points it was decided to use 7/8 as the cut-off for this study.

TABLE 2.6: CALCULATING SENSITIVITY AND SPECIFICITY BY ROC ANALYSIS SRQ 20 SCORE

	Less than or equal to 3	4	5	6	7	8	9	10	11	12	More than or equal to 13
Normal	1	4	3	1	5	1	0	0	1	0	0
Abnormal	0	0	0	1	7	0	2	2	4	1	7

	Less than or equal to 3	4	5	6	7	8	9	10	11	12	More than or equal to 13
tpr	1	1	1	0.958	0.666	0.666	0.583	0.500	0.333	0.291	0
fpr	0.937	0.687	0.500	0.437	0.125	0.0625	0.0625	0.0625	0	0	0
Sensitivity - tpr* In percentage	100	100	100	96	67	67	58	50	33	29	
Specificity - fpr** In percentage	6	31	50	56	88	94	94	94	100	100	

* tpr = True positive rate

** fpr = False positive rate

As can be seen in table 2.4 sensitivity figures in most of the international studies range between 62.9% - 89.7% (excluding the Kortmann and Ten Horn study). Thus the sensitivity figure for the current study (67%) is moderate indicating that the probability of testing positive if the disease is truly present is good. Specificity figures in the reported studies (table 2.4) vary between 44% - 95.2%. The specificity for the current study (88%), is at the higher end of this range and therefore indicates that the probability of screening negative if the disease is truly absent is high.

2.3.5.5 Reliability of the SRQ-20

To date there is no research addressing the test-retest reliability of the SRQ-20. As the questionnaire measures mental health, which by definition is highly variable over time, traditional test-retest estimates of reliability would produce interpretation problems (WHO, 1994). As the SRQ-20 assesses mental health with an emphasis on mood (anxiety, depression) the test-retest outcome would be expected to be lower than would be expected for a measure of more stable variable such as social support.

Only two studies each have assessed the inter-rater reliability and internal consistency of the SRQ-20 (Iacoponi and Mari, 1989 and Kortmann and Ten Horn, 1988, in Brazil and Ethiopia and Iacoponi and Mari, 1989 in Brazil and Tafari *et al.*, 1991 in Ethiopia respectively). As the information on the inter-rater and internal consistency reliability tests was not available to the researcher at the data collection and analysis stage, no reliability tests were performed for the Hindi and Marathi versions of the SRQ-20 in this study.

2.3.6 Measuring social support and social networks

Various instruments have been devised and used to measure different kinds of social support and networks available to people with varying health problems. Some of the instruments measure only one or two aspects of support while others confound it with life events and social relationships (Glass and Maddox, 1992; Franks, Campbell and Shields, 1992).

2.3.6.1 The Close Persons Questionnaire

The Close Persons Questionnaire (CPQ) (Appendix D) devised by Stansfeld and Marmot (1992) was used in a longitudinal study to study the impact of psycho-social factors on the health of British civil servants. It is a detailed comprehensive measure of social support suitable for population surveys. The CPQ is designed to include both social network questions and quality of social support questions representing different types of social support. Network questions are drawn from Berkman and Syme (1979) and include frequency of contact with relatives and friends and social contact with workmates; attendance at religious services; membership of and attendance at clubs and social organisations; and engagement in voluntary service. Four different types of support are included: informational, emotional, appraisal and practical. The format of the questions is derived from Shaefer *et al.*, (1981) and Power *et al.*, (1988). The emotional and instrumental support questions are refined to address three aspects of support: what was the type of support needed; was it given within the last 12 months; and would more have been desired ? This latter question is designed to measure

Henderson *et al.*'s (1980) concept of 'adequacy' of support (Stansfeld and Marmot, 1992).

2.3.6.2 Measurement of support by the CPQ

At the start of the support questions, respondents are asked to nominate up to four close persons. The type of support questions are then applied to each of the four respondents in turn using a grid method. This enables an assessment of functional support from up to four sources per respondent with an indication of whether the source was kin or non-kin. The validity of the CPQ has been assessed in three ways: content validity, construct validity and criterion validity. Content validity was assessed by using 'perceived received' quality of support unlike the more abstract concept of 'availability' of support used earlier by Henderson *et al.*, (1980), which was based loosely on past experience, rather than the more objective experience of support received within a particular time period. Construct validity was sought by Henderson *et al.*, (1980) among objective indices of relationships. For instance, support is likely to be less in recent migrants or in those widowed or divorced. Criterion validity was established by comparing the questionnaire with the Self Evaluation and Social Support Interview (SESS), where the latter was considered the 'gold standard' criterion.

Thus the CPQ combines the different aspects of support in one instrument, including emotional/confiding, practical and negative aspects of support from up to four sources of support in a structured questionnaire format, as well as measuring social networks.

Furthermore, it has been tested in a large epidemiological survey and validated by interview within the selected sample. The CPQ is also sufficiently flexible to allow respondents to nominate their close persons rather than being restricted to particular roles (e.g. husband, work colleague). This means that in general, respondents choose to include those who provide most support within the close persons (Stansfeld and Marmot, 1992).

2.3.6.3 Changes in the CPQ for the current study

The current study used the two persons version of the CPQ. This was because it has been demonstrated (Stansfeld and Marmot, 1992) that the first two persons provide most support and are most reliably measured. As the current study was on a low-income migrant population, where a majority of the respondents were recent migrants (less than 1 year to 5 years), it was also felt that a two persons version of the CPQ was more realistic for a mobile population. This (2 persons) is the version presented in appendix A. Due to the low literacy level of the sample population, the CPQ although devised as a self-completion questionnaire, was administered to the women in an interview form.

The Hindi and Marathi versions of the CPQ retained most of the original questions, and also followed the lay-out of the original questionnaire (flow of questions). After pilot testing, the questions on rating of personal relationships and level of satisfaction with leisure time were dropped as they were not found to be socially relevant. Amongst the social network questions, the question on 'being comforted by being held

in someone's arms' was also dropped as it was perceived to be too personal/or culturally sensitive. The question on 'how often do you have parties at home' was changed to 'how often do you invite people for meals (lunch or dinner)' as the latter was more suitable to Indian low-income populations.

The factor analysis of the 15 items in social support used by Stansfeld and Marmot (1992) to reduce the type of support data to manageable yet meaningful composite variables was retained for the current study. Each type of support was reduced to emotional/confiding, practical and negative aspects of support; where the sum of the scores for each close person from each respective column (appendix A) was taken to indicate the total score for each kind of support. The 3 kinds of support were in turn the sum of the following areas in question 51 of the questionnaire at appendix A.

Confiding support = a+c+d+f+g+h+k

Practical support = l+m+o

Negative support = e+i+j+n

Types of support are listed in questions 51 a-o and network questions from questions 52-59. Details of the two close persons are from questions 51 p-x. The sum of the scores for each close person from each respective column was taken to arrive at the total score for each kind of support (as shown above).

As the CPQ has not been validated in developing countries and in low-income populations, particular steps were taken to test the instrument.

2.3.6.4 Reliability of the CPQ for the current study

Reliability was tested in the current study by readministering the CPQ to a sub sample (the first 50 women interviewed), within one to nine weeks after the survey questionnaire was completed. Alhough the intent was to conduct the retest interviews within 1-2 weeks of the first interview, field realities such as loss of time in deciding with supervisor on the sample for reliability based on field conditions and availability of the respondent for second interview extended the re-test interview from 1-9 weeks. However as social support is a stable variable it was found that even when the time difference between the test-retest interviews varied between 1-9 weeks there was no significant difference in the reliability of the two sets of data.

The results of the two interviews were compared to test the reliability of the CPQ.

A) Qualitative analysis of CPQ ratings

The results were divided into 3 parts

1) Perfectly matched/Exact matches where the close persons nominated by the respondent on the two different occasions matched perfectly, that is the same persons were nominated in the same rank order. There were 15 such perfect matches from the 49 respondents. i.e. 31% respondents were perfectly matched.(one respondent was widowed only 15 days prior to the first interview and her support persons were totally unmatched on both occasions - thus she was excluded)

2) Partly matched where the close persons nominated by the respondents were partly matched i.e the same people were mentioned both times but the rank order was different and sometimes one person was dropped on the second occasion.
There were 20 such matches i.e. 41% were partly matched.

3) Imperfect/Inexact matches where different people were mentioned on both occasion except for the spouse - and the rank order for that was different on most occasions.
There were 14 such matches i.e. 28% respondents who were imperfectly matched.

B) Quantitative analysis of the CPQ ratings:

Initially, test re-test reliability was assessed by performing reliability tests (Pearson's r) on the social support variables of the CPQ at time one and time two. However as the results were poor, the tests were performed once again after matching the persons nominated as close persons (as given above) at time one and time two. The results are shown below and in table 2.7.

1) Perfect matches (n= 15)

Confiding support = 0.2892

Practical support = 0.7091

Negative support = 0.4425

2) Partly matched (n= 15)

Confiding support = 0.7104

Practical support = 0.4335

Negative support = 0.1269

3) Inexact matches (only spouse (n= 19)

Confiding support = 0.3839

Practical support = 0.0276

Negative support = 0.1948

TABLE 2.7: RELIABILITY OF SOCIAL SUPPORT FROM CLOSE PERSONS

	INTERNAL CONSISTENCY (ALPHA)	PEARSON'S CO-RELATION (r) N = 49*		
Type of Social support	Close person (any place) N= 100	Perfect match N=15	Part match N= 15	Only spouse N= 19
Confiding support	0.5167	0.2892	0.7104	0.3839
Practical support	0.6728	0.7091	0.4335	0.0276
Negative support	0.7273	0.4425	0.1269	0.1948

* one respondent was widowed 15 days prior to the re-test interview and had no 'matches' during the second interview.

The reliability tests were performed on the three types of support, irrespective of order of nominated person (closest, second closest). This was done as the re-test was performed with only 50 respondents and very few respondents were available in each

category if the above categories were further categorised into closest, second close and third close persons. As can be seen from the above results and table 2.7, the results for social support are fair (practical support) to poor (confiding and negative support) as social support is a stable variable and reliability should be in the 0.8 and above range.

The problem could be with the measure of social support (CPQ) - which is unlikely as the reported reliability results in the U.K have been acceptable. Secondly, the problem could be with the manner of administering the instrument, that is instead of allowing the respondents to nominate the close persons both at time one and at time two, at time two the amount and kind of support provided by the same person (nominated at time one) could have been measured. The third problem responsible for the poor results could have been the women themselves, that is they failed to understand and respond to the questions in the required manner.

Internal consistency

Further, the internal consistency of the support questions was assessed on a 100 randomly picked questionnaires. Table 2.7 shows that the results for confiding, practical and negative support are 0.5167, 0.6728 and 0.7273 respectively. The results are thus only fair with confiding support being poor. However, if some item selection was done then the results for practical and negative support improve to 0.83 and 0.86 (quite acceptable range). Thus the instrument (CPQ) needs refinement for further use in an Indian setting, particularly for confiding support.

If the internal consistency for all the social support questions is calculated together it is 0.6460. Thus internal consistency for the social support questions is fair.

Social network questions (table 2.8) such as frequency of attending religious services, frequency of voluntary work, frequency of inviting people for meals also had fair reliability (r= 0.51, r= 0.52, r= 0.45 respectively). As with social support questions, if item selection had been done the internal consistency of the social network questions (table 2.8) could have been further improved.

TABLE 2.8: RELIABILITY OF SOCIAL NETWORK QUESTIONS

	PEARSON'S CO-RELATION - r N=50	INTERNAL CONSISTENCY - ALPHA
Number of people available for frank talk	0.44	0.829
Frequency of visits to relatives	0.48	0.653
Frequency of meeting co-workers socially	0.52	0.686
Frequency of visiting friends	0.21	0.348
Frequency of contact with friends/ relatives by letter	0.16	0.453
Frequency of attendance of religious services	0.51	0.272
Frequency of voluntary work	0.52	0.676
Frequency of attendance at clubs/organisations	0.38	0.681
Frequency of inviting people for meals	0.45	0.620

2.3.6.5 Validity of the current study

Assessment of validity (where validity is defined as whether the measure actually does measure the underlying attribute or not), has several components. The first component, face validity is used to refer to the intuitive appeal of the items. The CPQ seems intuitively credible as it measures both social support and networks as well as three different types of support (emotional/confiding, practical and negative). Further it measures support from up to 4 close persons and is flexible enough to allow respondents to nominate their close persons rather than being restricted to particular roles (e.g. husband,work colleague). The next component of validity called content validity was tested by consulting Dr. Donna Lamping at the London School of Hygiene and Tropical Medicine, an expert on instruments to measure social supports and networks. In an interview with the researcher she suggested that the CPQ was a good instrument for the measure of social supports and networks and that the reliability and validity studies performed by the authors (Stansfeld and Marmot, 1992) were correctly done, and the results were acceptable. Criterion validity, the next component of validity, measures whether the variable can be measured accurately and compares it with a 'gold standard'. Two types of criterion validity have been defined - firstly concurrent validity, where there is evidence of associations with other measures administered at the same time. In the current study this was not feasible as no gold standard exists for developing countries. In addition to this, time and resources did not permit the application of two instruments to measure social support and networks. The second type of criterion validity - predictive validity links a measure to some conceptually related future event, such as use of health services. As the current study

is not a longitudinal, prospective study, predictive validity cannot be tested. The last component of validity - construct validity is used when the variable of interest cannot be directly observed. This is of 2 types - convergent and discriminant. Here the performance of a particular measure is compared with other variables to which it should or should not be related. In the current study the construct validity was addressed by testing the following hypotheses:

1) women with high level of social support will have:

(a) good mental health status,

(b) low reported gynaecological morbidity,

(c) work for wages,

(d) high educational status,

(e) a husband with high educational status,

(f) high family income

2) women with good social networks (not isolated in the isolation scale and good beyond the household scale) will have:

(a) good mental health status,

(b) low reported gynaecological morbidity,

(c) work for wages,

(d) high educational status,

(e) a husband with high educational status,

(f) high family income

Note: For length of residence the direction of association is not clear, it was therefore not included in the hypotheses.

Table 2.9 summarises the findings of the hypotheses framed to test the construct validity of the CPQ.

TABLE 2.9: SUMMARY OF FINDINGS OF HYPOTHESES TO TEST CONSTRUCT VALIDITY OF CPQ

SOCIAL SUPPORT HYPOTHESES TO TEST CONSTRUCT VALIDITY	FINDING	SOCIAL NETWORK HYPOTHESES TO TEST CONSTRUCT VALIDITY	FINDING
Types of support and morbidity **1 a & b***	-no significant association between levels of all three types of support from closest and second close person and gynaecological and psychiatric morbidity -if definition of gynaecological morbidity was revised to presence of 2 or more morbidity then high levels of confiding support from second close persons are associated with higher reporting of gynaecological morbidity -no significant association between levels of all three types of support from non-spouse and gynaecological and psychiatric morbidity -higher levels of confiding and practical support received from spouse are associated with lower psychiatric morbidity for further discussion see section 3.4.2	Social network and morbidity **2 a & b ***	-no significant association between the two social network scales and gynaecological and psychiatric morbidity -significant association between isolation scale and psychiatric morbidity if cut-off point revised to 8/9 for further discussion see section 3.4.3
Types of support and respondent's occupation **1 c***	-respondent's who work for wages receive higher levels of confiding support and lower levels of negative support from closest person but low level of practical support from closest and second close person for further discussion see section 3.2.4.2	Social network and respondent's occupation **2 c ***	-respondents who work for wages are less isolated; but women's occupation is not associated with a poor or good network beyond the household for further discussion see section 3.2.7.2

* complete hypotheses stated in section 2.3.6.5 above

TABLE 2.9 continued

SOCIAL SUPPORT HYPOTHESES TO TEST CONSTRUCT VALIDITY	FINDING	SOCIAL NETWORK HYPOTHESES TO TEST CONSTRUCT VALIDITY	FINDING
Types of support and respondent's education **1 d***	-respondents with formal schooling and/or higher educational level receive higher levels of confiding support from closest person and confiding and practical support from second close persons for further discussion see section 3.2.4.1	Social network and respondent's education **2 d ***	-respondent's who have formal schooling and/or higher level of education have good social networks beyond the household and those with no formal schooling are more isolated on the isolation scale for further discussion see section 3.2.7.1
Types of support and husband's education **1 e***	-respondents whose husbands had formal schooling receive higher levels of confiding support from closest and second close person for further discussion see section 3.2.4.1	Social network and husband's education **2 e ***	-no significant association between the two social network scales and husband's educational status for further discussion see section 3.2.7.1
Types of support and family income **1 f***	-respondents with higher family monthly income receive higher practical support and more negative comments from closest person and higher confiding support and fewer negative comments from second close person for further discussion see section 3.2.4.3	Social network and family income **2 f ***	-respondent's with higher family monthly income are less isolated and have a good network beyond the household for further discussion see section 3.2.7.3

* complete hypotheses stated in section 2.3.6.5 above

2.3.7 Measuring the emic perspective

In order to understand women's illness experience and the meaning of the reported gynaecological morbidity as perceived by them, an adapted version of Kleinman's (1980) explanatory model was used. Thirty six women reporting at least one gynaecological morbidity/symptom were interviewed. Approximately five women from each of the 8 reported gynaecological morbidity groups outlined in the questionnaire at appendix A were selected for the in-depth interviews. Initially it was planned to interview fifty women, five from each of the ten morbidity conditions considered for the study earlier. However, as abortion and IUD morbidities were reported by very few women and upper and lower reproductive tract infections were merged into one morbidity condition, finally only 36 women were interviewed for the in-depth interviews. Further, during the course of the survey interviews it was realised that most women reported more than one gynaecological morbidity. Hence the morbidity condition for which the woman reported the maximum number of symptoms (listed by the women as the most 'troublesome') was taken as the main condition when considering her for inclusion in the in-depth interview. The 36 women for the in-depth interviews, were selected on the basis of :

- morbidity condition of either menstrual problems, reproductive tract infections, prolapse, infertility, dyspareunia, urinary infection, abortion morbidity, sterilization related morbidity or IUD morbidity
- willingness to participate
- ability to reflect and share their experiences

- cross-section of women of varying ages, education, ethnicity, different morbidity experiences/outcomes and treatment history.

Appendix E gives the questions formulated on the basis of the explanatory model (EM) and pilot testing with 5 women, to elicit the emic perspective of these women. Each of the in-depth interviews was tape recorded. The interviews were conducted in Hindi or Marathi. The researcher conducted the interviews individually with each of the key informants, and a research assistant recorded observations. She also assisted in the rapid assessment procedures used during the interview such as body mapping (respondents' explanation of the exact source/location of pain/gynaecological morbidity by drawing the necessary body parts) by the women, free listing (categorizing different illnesses in a particular domain) and rank ordering the free listed illnesses on the basis of severity of women's illnesses (Protocol for investigating women's reproductive health, 1990). Later the recorded interviews were transcribed into the local language and finally translated into English.

2.3.7.1 Free listing of women's illnesses

During free listing each of the women were asked to verbally list women's illnesses in their community. This helped the researcher to learn about the woman's repertoire of illnesses in women as well as initiate the topic for discussion with the key informant. As seen in other studies amongst low-income women with no formal education/minimal formal education (Patel, 1994; Kannani *et al.*, 1994), women free listed symptoms arising from an illness rather than the illness itself. The women listed

symptoms/illnesses ranging from body ache, headache, stomachache, backache, red and white discharge, prolapse, to pain in the chest and mental tension.

2.3.7.2 Ranking of women's illnesses

After free listing illnesses amongst women with the first five key informants, a list was made of the symptoms most commonly reported by the key informants as well as during pilot testing. Each of these symptoms was boldly written out on a card and a rough picture depicting the symptom in a woman drawn below it. These cards were then arranged on the floor (in no particular order) and the women asked to rank the illnesses/symptoms shown on the cards in order of seriousness. 10 women did not reply as they felt 'unable to do so' or 'because all the illnesses were serious'.

The illnesses that were included for ranking were

- white discharge
- red discharge
- prolapse ('something heavy down below')
- lower abdominal pain
- numbness of hands and feet
- weakness/fatigue
- backache
- headache
- half headache
- hands and leg pain

- stomachache
- waist pain
- chest pain

2.3.7.3 Body mapping by key informants

Besides verbally discussing the symptoms experienced by them, the researcher used body mapping with the key informants to understand the women's perception of their bodies. The mapping was restricted to those body parts where the women reported pain/symptom e.g. the uterus, lower abdomen, vagina etc.

After an initial discussion on the morbidity symptoms experienced by the women they were asked to draw the areas effected by the symptoms and describe the process. The women were encouraged to draw either with a pen/pencil on paper or with white/coloured powder on the floor of their dwellings. The latter is used by Indian women to draw 'rangolis' (a traditional art form used to decorate the house) in front of the main doorstep leading to the house. One woman initially used a stick to draw the map on the loose soil in front of her doorstep. The map (drawn by the women) was then reviewed in more detail and the women's perception of how and where the symptoms effected them and why were explored.

2.4 FIELD WORK

2.4.1 Contact with the community

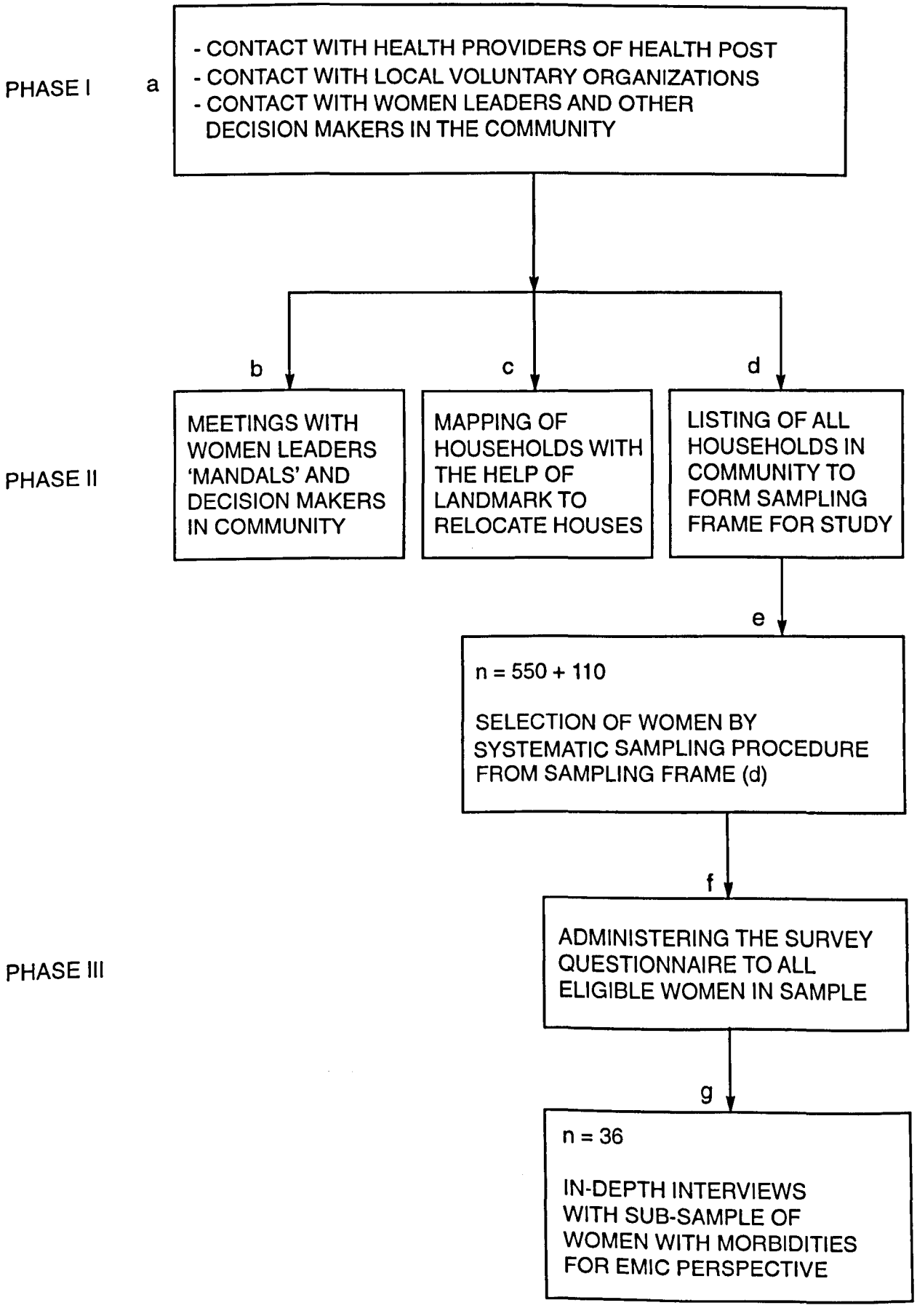
The study was conducted in three phases (figure 2.9). The first phase covered contact with local health providers, women leaders and other decision makers in the community such as the workers of a voluntary organisation located in the community. A series of meetings were held with the local health post medical officer and the outreach workers to obtain demographic details of the community. Five visits were also paid to the community to make contact with the local people as well as identify voluntary organisations, 'mandals' (groups), local leaders and other decision makers in the community. Later a series of meetings were held with formal and informal women leaders from different ethnic groups and different geographical parts of the community to explain the study, the eligibility criteria (inclusion and exclusion criteria) for women in the sample population and the procedure of conducting the study. Local terms used by the women to denote gynaecological morbidity were identified during these meetings for use in the local language versions of the questionnaire.

2.4.2 Mapping and Listing

As a slum community is constantly changing, no up-to-date list of households in the community was available either from the local health post or the Thane health department. The census data (1991) for this particular community was also difficult

Figure 2.9

STUDY DESIGN

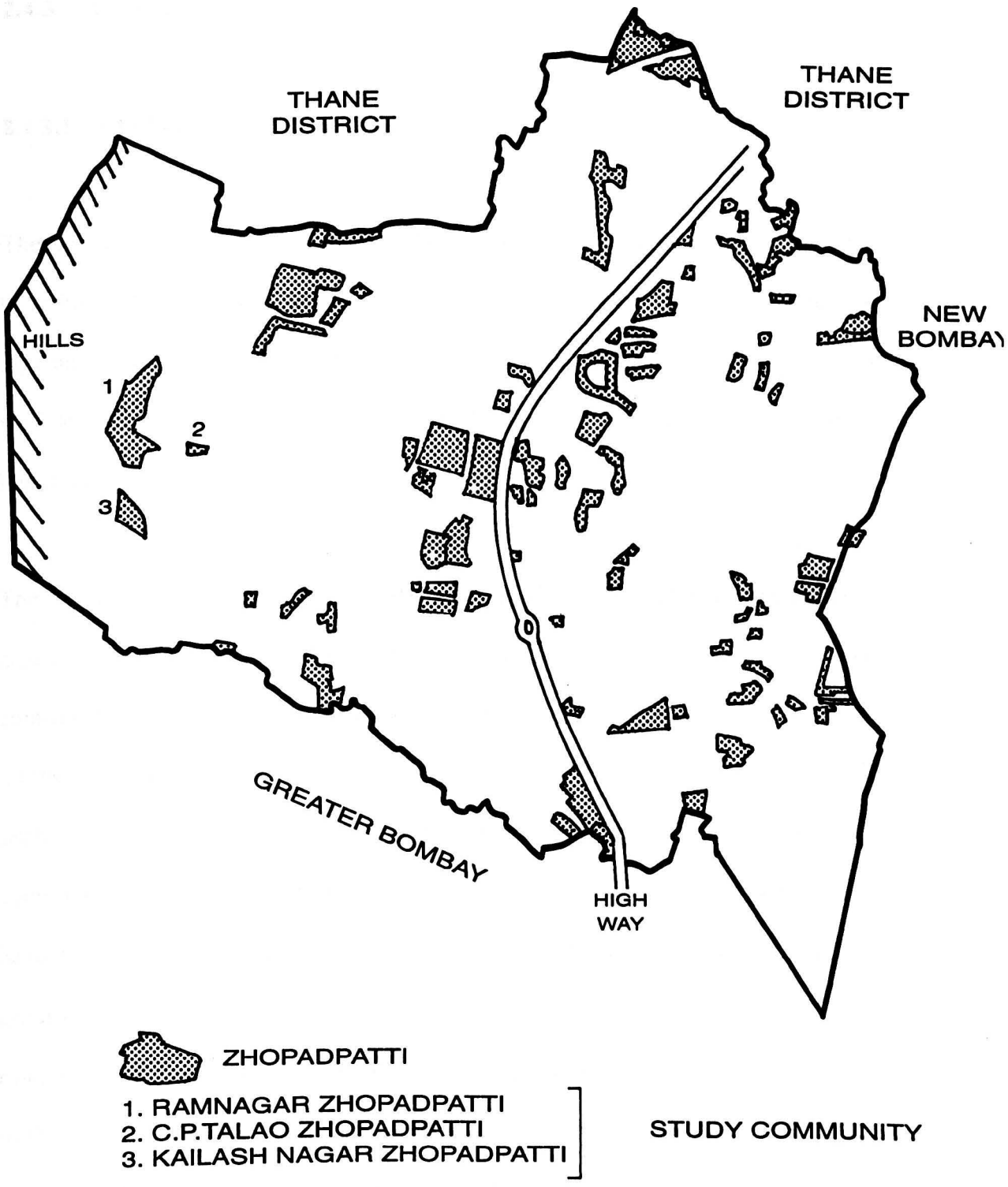


to obtain as the data was collated by ward and it was difficult to separate it for the 3 zhopadpattis which formed the study community (figure 2.10). The census data was also outdated as many new residents had arrived in the community or moved between the 3 zhopadpattis since 1991. Thus a list of households in the three zhopadpattis, comprising the research community, had to be created to form a sampling frame for selection of the sample. Three research assistants listed the houses in the 3 zhopadpattis comprising the selected community by visiting each house and interviewing the residents. At each household the number of permanent male and/or female members, age of the female members (if residing in the household) and type of household (nuclear or extended) was noted. The listing of households followed a particular pattern (alley wise) as far as was feasible from Kailash nagar through Ramnagar through C.P. Talao.

As none of the houses had identification numbers and the houses were not located in any particular order, the listed houses were marked with chalk and a rough map of the alleys and main identification structures in the community such as places of worship, shops, clinics, community halls and prominent trees and wells/pumps was also drawn to help relocate the households. As there was no clear pattern (circular or alley wise) the map could not be drawn to scale, within given resources and time constraints. Thus a list of all the households and the women and their age was made to provide a sampling frame for the study. As planned earlier, mapping by the community could not be undertaken as the majority of the community population was very mobile. Even members of the same ethnic group could not identify or give directions of the homes of other members of their ethnic group. The rough maps and the list of households

Figure 2.10

ZHOPADPATTIS (SLUMS) IN THANE CITY



were cross-checked with the outreach workers of the local health post and voluntary organisation.

2.4.3 Sampling procedure

2.4.3.1 Selection of slum community

The town planning department and the health department of Thane Municipal Corporation (TMC) were contacted to collect information on the total urban population in Thane, the distribution of population under each of the 11 urban health posts, as well as the location and demographic details of all the zhopadpattis under the 11 health posts.

The zhopadpattis of Kailash nagar, Ramnagar and C. P. Talao all under the outreach area of Kisan nagar health post were finally selected as the universe of the study. This community (figure 2.10) was selected as it was not located in the centre of the city nor on the outer periphery (towards tribal area). The residents were thus neither too 'well settled' nor very 'ruralised' but a typical low-income urban community. Also the community was not too close to the health post nor at its outer limit and thus did not have excellent nor very poor access to health services. The distribution of ethnic groups, income and migration status was similar to that of other communities and the researcher had no prior contact with this community. An additional factor for selection of the community was the very co-operative female medical officer of the local health post and her experienced team of outreach workers.

The selected community comprised 3469 households. Almost all the households were nuclear, that is, comprising of a married couple and their children. In the households where there was more than one woman in the reproductive age group, only one woman (the younger one) was interviewed as of the households which had two eligible women the older woman (the mother-in-law) would be nearing menopause.

2.4.3.2 Selection of households

The EPI-INFO software package was used to select the sample size for the study. Assuming 50% prevalence (as seen in the Indian studies in section 2.2.1.1 in chapter 1) of gynaecological morbidity (and hence equal numbers in groups I and II) a sample size of n= 275 in each group was calculated to detect a difference of 14% or risk ratio 1.4 with 90% power at the 5% significance level (when prevalence of mental ill-health assumed to be 36% (as seen in section 2.3.2, chapter 1) in non-gynaecological morbidity group). Thus a total of 550 households were selected for the study. Further, a 20% sample comprising of 110 households was added to the sample size to allow for refusal rates, non-availability of some women etc.

2.4.3.3 Systematic sampling

In order to cover 660 households, from the sampling frame of 3469 households listed in the initial phase, every 6th household was selected. Due to the arbitrary nature of the households in the 3 zhopadpattis it was difficult to choose a random number of households for simple random sampling. The identification numbers which had been

marked during the listing of households could not be used to relocate households at random as the Hindu New Year was celebrated before the main survey, and as most of the houses were white-washed for the occasion, the identification numbers washed off.

Thus a fixed start was made on a household at the edge of the 2nd zhopadpatti and then systematically every sixth eligible household (as per the list of households created, see section 2.4.2) was included in the sample. If the 6th household was ineligible (woman did not meet the eligibility criteria, only men in the house, house locked for an extended period) then the house immediately next on the list was selected. It was presumed that the arbitrary nature of the houses would control for sample biases normally encountered in systematic sampling procedures.

660 (550+110) households were identified through the systematic sampling procedure explained above. Married women in the reproductive age group residing in these households were administered the eligibility questions (questions 3-10). Those who met the eligibility criteria were administered the rest of the questionnaire (questions 11-50). As the gynaecological morbidity condition was presumed to be prevalent in at least 50% of the women it was assumed that there would be an almost equal number of women in both groups I (reporting gynaecological morbidity) and II (reporting no gynaecological morbidity).

The questionnaire was administered in one visit. Although it was initially planned to administer it in two parts so as to maintain confidentiality (due to presence of health

worker) and prevent interviewee fatigue, during the interviews it was realised that as a good rapport had already been established with the women during the informal meetings and the listing of households no further introduction was required by a health worker. Further, as the women were busy with household tasks (e.g. filling water from the common tap) or had to leave for work they preferred to be interviewed in one sitting. Each interview was completed in 30-40 minutes.

It is recognised that the health seeking behaviour of the women might influence their gynaecological and mental health status which is determined in part by the social support and networks available to them. However questions relating to health seeking behaviour were not included in the present study in order to prevent widening the scope of the study. Also as has been discussed (Bang *et al.*, 1989), women with gynaecological morbidity often do not report to health centres for treatment due to the stigma and customs related to gynaecological morbidity.

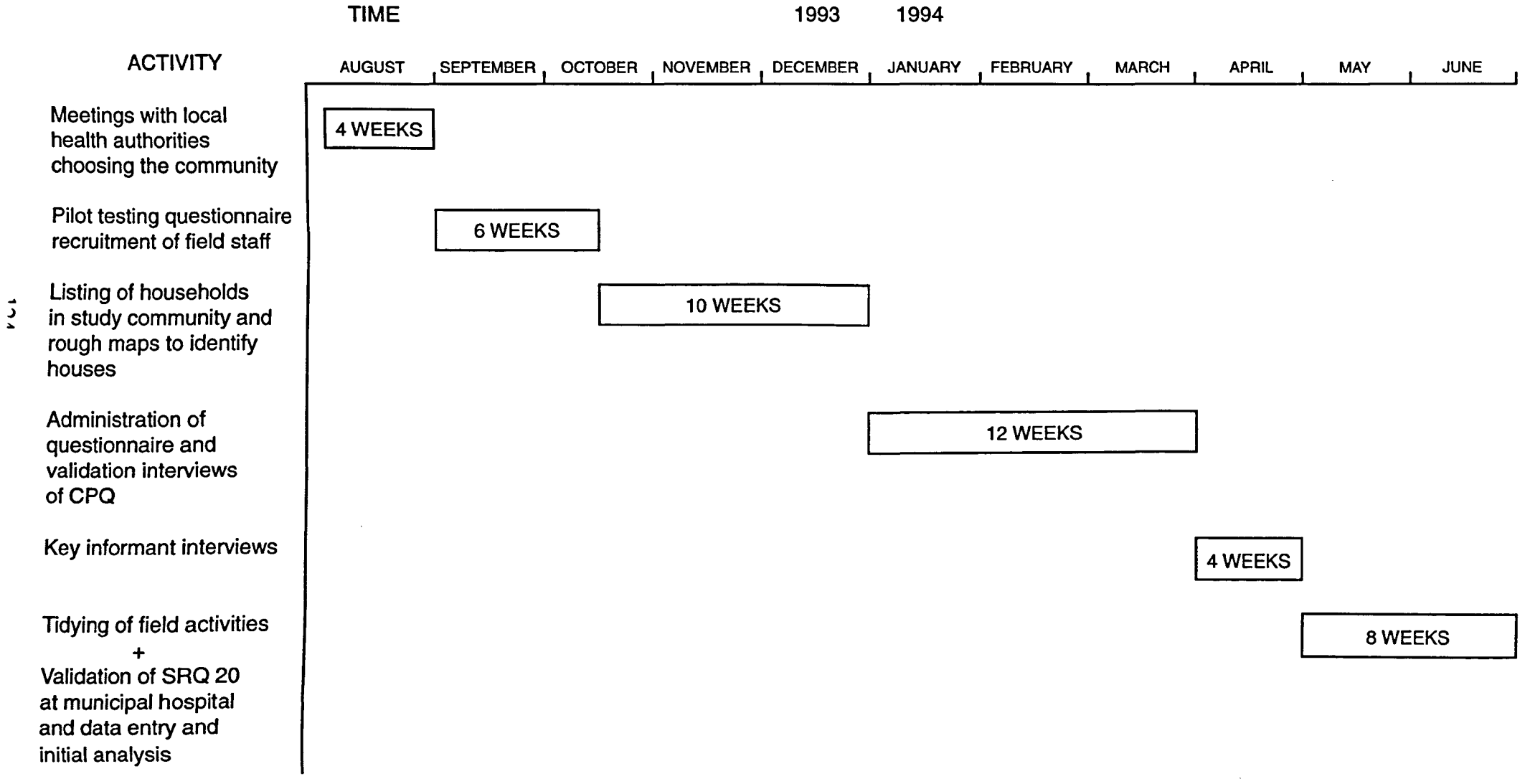
The stages of the study design are summarised in figure 2.9

2.4.4 Duration, response rate and supervision

The fieldwork was conducted in different stages (figure 2.11). The first stage involved contacting field level health providers, local leaders, women in the community, selecting the study community, recruiting field staff and the development of research tools. This took a total of 10 weeks. The next stage involved listing of the households in the community and creating rough maps to relocate houses in the community, which also took a total of 10 weeks. The questionnaire was then administered to the

Figure 2.11

DURATION OF FIELD WORK



eligible women, including the retest interviews for the CPQ, followed by the in-depth interviews with key informants. This was completed in 16 weeks. The last stage involved the validation of the SRQ-20. This took 8 weeks.

The researcher completed the first stage of field work before recruiting field staff. During data collection the researcher collected the questionnaires from the research assistants and screened them daily. She also made personal checks in the field to supervise the research assistants and to resolve any problems encountered during data collection. There was daily interaction between the researcher and research assistants which ensured good communication and efficient fieldwork. There were no significant interviewer problems. The data collection was completed between December 1993 and April 1994 and cleaned between May and June 1994.

The response rate for the study was 99.8%. All the women in the community were very co-operative during data collection. Though the North Indian women were afraid to speak on a private subject such as gynaecological morbidity, especially because of their husbands suspicion of their talking to strangers, they willingly rescheduled their day to answer the questionnaire. This community also had a severe water shortage and and the women had to wait for long hours at the common water taps to collect water for their household needs. Inspite of these pressing every day problems the women readily agreed to participate in the study. The working women also readily agreed to meet the researcher at a fixed time on their day off (Sunday) or went to work late in order to participate in the survey.

The researcher manually checked each questionnaire at the end of each fieldwork day for consistency errors and completeness of each questionnaire. Missing information which required re-visits was promptly obtained by the research assistant concerned and corrections which could be made in consultation with the researcher were made immediately. The field questionnaires were then translated and coded onto the English version using the code book at appendix F.

The data was entered twice by separate data operators using the SPSS package. The double entry helped in checking errors. The data was then cleaned by use of computer editing specifications for consistency and range errors in preparation for analysis. The in-depth interviews were transcribed and then translated into English in preparation for content analysis to provide the emic perspective of gynaecological morbidity using Kleinman's explanatory model.

CHAPTER 3: RESULTS

This chapter has four sections. Section one describes the social and demographic characteristics of the study population and section two details the types of social support and social networks available to the respondents. The third section discusses the presence of gynaecological morbidity in the women and presents the emic perspective of gynaecological morbidity and its management by key informants. The last section - four, discusses the association between gynaecological and psychiatric morbidity and the social, physical and psychological effect of gynaecological morbidity on the women. This section further debates the vulnerability of women to the two morbidities by exploring their (morbidities) association with socio-demographic characteristics and the availability of social support and social networks.

Statistical analysis was performed when appropriate using Mantel Hanzsel test or Chi-square to find the degree of association in data with normal or ordinal levels of measurement.

3.1 SOCIAL AND DEMOGRAPHIC CHARACTERISTICS OF THE SURVEY POPULATION

A total of 3791 households were identified during listing of households in the three 'zhopadpattis' comprising the research community. These households comprise the population of the study.

3.1.1 Characteristics of the women

Though women in the reproductive age group (that is 16-45 years of age) were interviewed for the study, most of the respondents (86.2%) in the survey sample were between 16-35 years (figure 3.1), of which half (51.0%) were between 26-35 years of age (see table 2.2 on which the following description is based).

All the 660 women in the survey sample were ever married. 97.7% were currently married, while 15 women (2.3%) were widowed. Though divorced and separated women were also eligible for inclusion in the sample, no such women were encountered in the course of the survey.

3.1.1.1 Ethnicity and religion of the respondents

The majority of the respondents spoke Marathi (59.5%) - the language of the home state Maharashtra. 18% of the respondents spoke Hindi, while 5.5% spoke Telugu, 4.2% spoke Bhojpuri and 3.9% and 3.5% spoke Malyalam and Nepali respectively. Respondents who spoke Gujarathi, Bengali, Konkani, Tamil and Wadari (adivasi dialect) formed only 5% of the sample. All the respondents spoke Hindi (national language) or Marathi, as these two languages are used for verbal communication in Bombay. The researcher and the research assistants involved in data collection were all conversant with both languages.

FIGURE 3.1

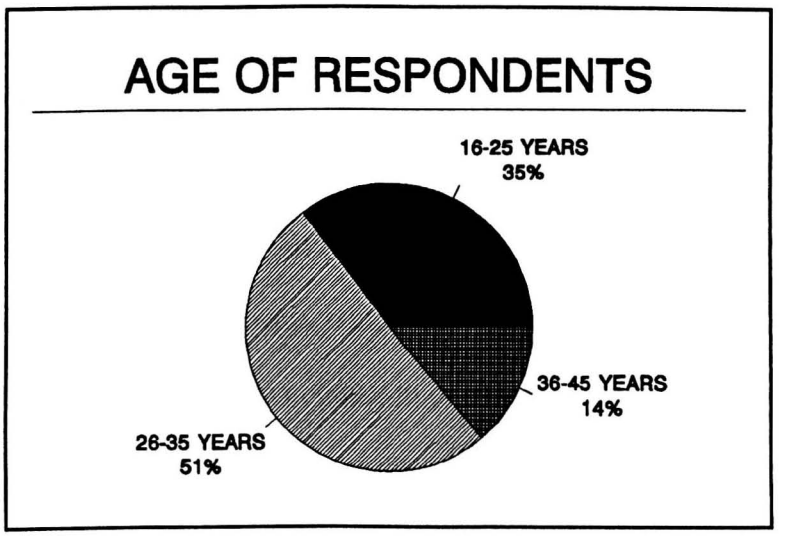
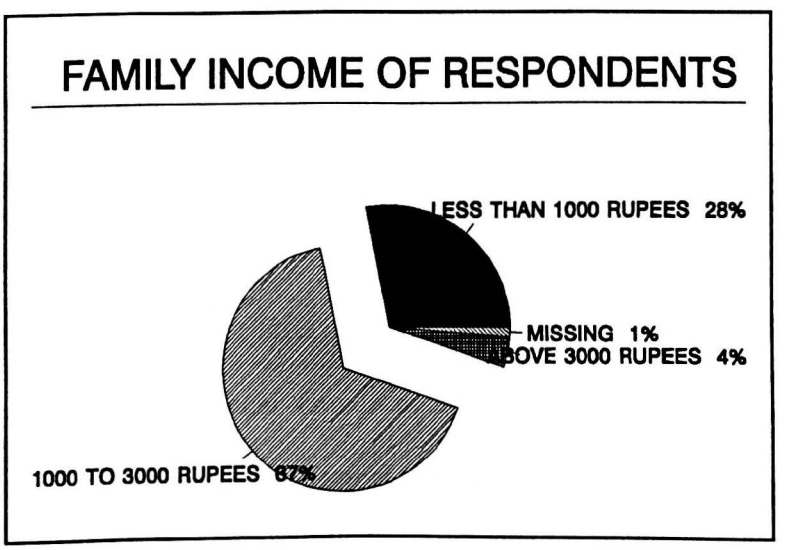


FIGURE 3.2



The majority of the respondents were Hindus (77.1%), the next largest group was of Buddhists (5.8%) popularly called 'Baudhs' in the community, followed by 3.3% Christians, 2.1% Muslims, 1.2% Varli (adivasis) and 0.5% Nepalis.

3.1.1.2 Family income of respondents

More than half of the respondents (67.1%) had a family income between 1000 to 3000 rupees per calendar month (pcm), while only 3.5% had an income above 3000 rupees pcm (figure 3.2). 29.2% of the population of Maharashtra state live below the poverty line (combined figures for rural and urban). This is very close to the National figures (29.9). The per capita income for the country for 1989-1990 was estimated to be 4252.4 rupees (Health Information of India, 1991) which indicates that only 3.5% of the study population or less, have a per capita income close to the national figure.

3.1.1.3 Education and occupation of respondents

A little less than half (48.2%) the women had no formal schooling (figure 3.3) and only 21.2% were employed (figure 3.4). Of this 9.8% (65) were in part-time informal occupations such as domestic work, vegetable vendors and flower sellers. 4.4% (29) were employed in full-time informal occupations such as sewing clothes, managing grocery stores, running local laundries, making bead necklaces and sewing and embroidering at home on a contractual basis, with the local voluntary organisation.

FIGURE 3.3

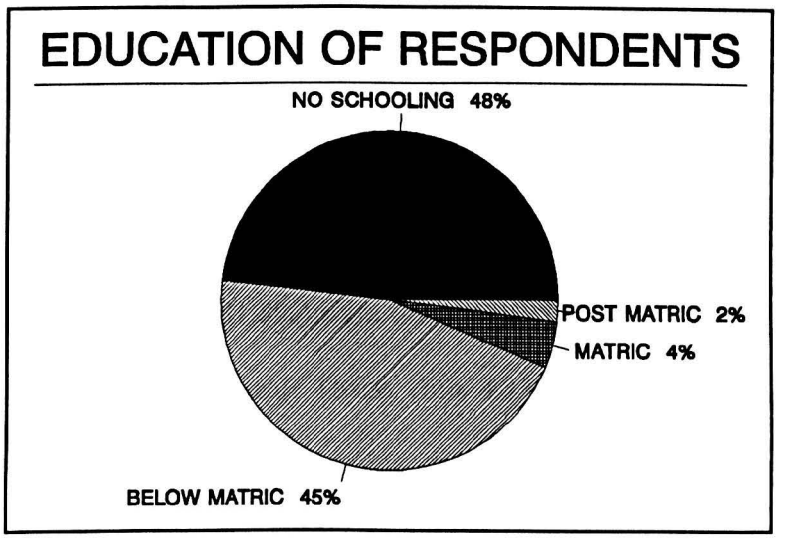
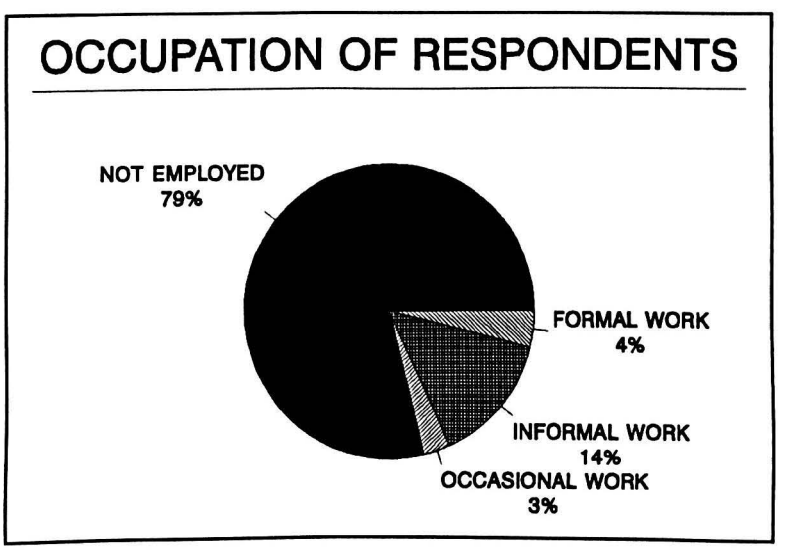


FIGURE 3.4



Only 0.5% (3) of the women were employed in part-time formal occupations such as community workers or in the local industrial units as labourers. 3.5% (23) were in full-time formal employment such as outreach workers in non-governmental organisations and as labour in the local fish factory. 3% (20) of the women did occasional work only such as domestic work or as labourers on daily wage in road work or in local industries.

Most of the respondents (81.8%) were born in rural areas outside Thane while 13.9% were born in urban areas outside Thane. Only 4.1% of the women were born in Thane itself. Several of the socio-demographic characteristics of the respondents have been described in table 2.2 & figures 3.1 to 3.4. The remaining characteristics relating to length of urban stay of respondents and their husbands as well as the socio-demographic features of the husband are shown in table 3.1.

3.1.1.4 Urban residence of respondents and spouse

As can be seen in table 3.1 the majority of the respondents (71.1%) and their husbands (54.2%) have been in the community up to 10 years. Similarly most of the respondents (63.6%) and their husbands (66.5%) have had an urban residence (in Thane or elsewhere) of up to 5 years. Thus, the Thane slums house more fresh/first generation migrants than second or later generation migrants. The spouses have a comparatively longer urban stay as seen above than the respondents, as they first come to the city/urban place in search of work and the wife and children join him later.

TABLE 3.1: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS AND HUSBANDS

VARIABLE	ATTRIBUTE	FREQUENCY (%), N=660
Length of Respondent's Residence in Community	1 to 10 Years 11 to 20 Years 21 to 40 Years	469 (71.1%) 163 (24.7%) 28 (4.2%)
Length of Husband's Residence in Community	1 to 10 Years 11 to 20 Years 21 to 48 Years	349 (54.2%) 210 (32.8%) 101 (13.0%)
Duration of Respondent's Urban Residence	Up to 5 Years 6 to 10 Years 11 Years and above	420 (63.6%) 78 (11.8%) 162 (24.6%)
Duration of Respondent's Husband's Urban Residence	Up to 5 Years 6 to 10 Years 11 Years & above	439 (66.5%) 66 (10.0%) 155 (23.5%)
Husband's Educational Status	No Formal Schooling Below Matric Upto Matric Beyond Matric Missing	125 (18.9%) 343 (52.0%) 116 (17.6%) 68 (10.3%) 8 (1.2%)
Husband's Occupation	NA and Missing Regular Employment Daily Labourer Occasional Work Own Business	52 (7.9%) 262 (39.7%) 233 (35.3%) 48 (7.3%) 65 (9.8%)

3.1.1.5 Education and occupation of spouse

Only 18.9% of the husbands had no formal schooling as opposed to 48.2% of the respondents and the majority of the husbands (52%) were educated below matric. The literacy rates for the respondents and their husbands is not in keeping with the urban Thane figures for literacy for men and women. In Thane, literacy rates for urban men are 85.2%, and for women are 73.2% (Census data, 1991). Though literacy rate for men (81.1%) is comparable to the district figures, the rate for women is far lower (51.8%). One of the reasons for this could be that literacy rates for women in

Maharashtra are high as compared to the rest of the country and migration of adult respondents from other states has contributed in lowering the literacy rate for the study community. Another factor could be that as the literacy rate for rural Thane is lower for women (37.6%), migration of respondents from rural areas has also contributed to the low literacy rate amongst women in the study community. Further, as against 21.2% of the respondents (table 2.2) who were employed for wages, 92.1% of the husbands (table 3.1) were employed for wages. The majority of the husbands (39.7%) were in regular employment, though almost an equal number (42.6%) worked as daily labourers or did occasional work. This has implications for access to health as spouses or respondents who have temporary/daily wage employment/own business do not have access to any health insurance scheme normally provided by employers to permanent staff and their families (eg. the Employees State Insurance Scheme (ESIS) or the Central Government Health Scheme (CGHS)).

3.1.1.6 Major illness reported by respondents

To explore the association between presence of major illness (as reported by the women) and symptoms reported for gynaecological morbidity or mental illness, respondents were probed about presence of any current major illness. Only 4.7% of the respondents reported the presence of a major illness. Illnesses reported as major by the women were asthma, lumps in the breast requiring surgery, kidney problems, jaundice and diabetes. All the women who reported the above illnesses were undergoing treatment. Though none of the illnesses were of a debilitating nature nor severe enough to interfere with daily living activities, the question on presence of a

major illness was initially included to find out if the presence of a major illness (chronic or terminal) affected reporting of either of the morbidities (gynaecological morbidity and psychiatric morbidity).

7.1% of the women reported unwell to the extent that their daily living activities were affected by reported morbidity (symptoms), that is they felt unable to perform their daily chores. This number is almost double the number (4.7%) who reported the presence of a major illness.

3.2 SOCIAL SUPPORT AND SOCIAL NETWORKS

3.2.1 Availability of close persons

All the respondents nominated a closest person. 65.6% mentioned their spouse as closest person who provided support to them, followed by 8.9% who nominated neighbour (not relative), 8.7% nominated their mother, 7.7% nominated 'other relative', 3.2% nominated friend, 2.3% neighbour (relative), 2% their child and 1.7% their mother-in-law. 22.6% respondents did not nominate a second close person. Of those who nominated a second close person 18.8% nominated other relative followed by 18.6% who nominated their spouse. 15.3% nominated neighbour (not relative), while 10.3% nominated their mother, 3.9%, 3.3% and 1.3% nominated their friend, neighbour (relative) and child respectively as second close person. Only 13.6% respondents nominated a third close person.

Not surprisingly, as most of the respondents nominated the spouse as close person (65.6% and 18.6%), and an appreciable number of respondents were between 16-35 years of age, most of the close persons are 19-40 years of age.

If the close persons categories of closest person, second close person and third close person/spouse are collapsed and a fresh category (any place) of spouse and non-spouse created, then 97.4% (643) of the respondents nominate spouse and 75.5% 498) nominate non-spouses as close persons.

On examining the marital status of the close persons, it is seen that most (91%) are currently married. This is also not surprising as one of the eligibility criteria for inclusion in the universe of the study for sample selection was 'ever married' women. As spouses were mainly nominated as closest persons this is understandable for this category. But interestingly, most of the second close persons were also married neighbours, or married relatives (sister-in-law) or parents. This raises the question "Are women even in urban settings encouraged to interact only with other married women"? or is it because young married women who formed the major part of the sample find it easier and more satisfying and helpful to form relationships with other married women in a similar situation to their own.

Only 11.7%, 8.4% and 11.8% of the first second and third close persons worked with the respondent. Few of the respondents had close persons who were work mates as only 3.5% had full time formal employment. More than 64.8% of the first 2 close persons lived in the same community as the respondent, which is not surprising as

(mentioned above) a good number of the closest and second close persons were spouses. For the same reasons, most of the respondents had been acquainted with the close persons for 11 years or more (58.6% and 54.4% for closest and second close persons respectively) followed by those acquainted for 5-10 years and a very large proportion of the respondents had seen closest persons for 26 days or more in one year (91.2% and 77.2% respectively for closest and second close persons).

3.2.2 Types of social support available from close persons

For purposes of analysis the three social support measured by the CPQ in this study (confiding, practical and negative) were divided into two levels -low and high. Each type of support was divided into the two levels logically, that is the total values (eg. 1-28) for each kind of support were divided into two equal parts, where the lower half (1-13) represented the low level and the upper half (14-28) the high level of support. A majority of the respondents receive high levels of support for all 3 types of support - confiding, practical and negative aspects[1] of support from the closest person. worse.

Table 3.2 shows the levels of support (low and high) for all three kinds of support from the closest person and second close person. There is a significant association between low and high support for all three kinds of support between closest and second close persons. Table 3.2 shows that there is a proportional increase in high level of support for confiding and practical support for both closest and second close

[1] **In negative support**, a low score is a 'good thing' in that it reflects fewer instances of the person giving worries and anxieties, not encouraging confidences or talking in such a manner as to make things worse.

persons. However in the case of negative support though there is a proportional increase in low level of support (a 'good thing') from second close person, there is a proportional increase in high level of negative support from closest person -a negative finding as it indicates that the closest person provides more worries and anxieties.

TABLE 3.2: TYPES OF SUPPORT FROM CLOSEST AND SECOND CLOSE PERSON

TYPES OF SOCIAL SUPPORT		FREQUENCY OF SUPPORT FROM CLOSEST PERSON N=660 (%)	FREQUENCY OF SUPPORT FROM SECOND PERSON N=511 (%)	p VALUE
CONFIDING	LOW	47 (7.1)	114 (22.3)	Chi Square= 56.02
	HIGH	613 (92.9)	397 (77.7)	p=0.000
PRACTICAL	LOW	145 (22.0)	212 (41.5)	Chi Square= 51.77
	HIGH	515 (78.0)	299 (58.5)	p=0.000
NEGATIVE	LOW	219 (33.1)	302 (59.0)	Chi Square= 78.34
	HIGH	441 (66.9)	209 (41.0)	p=0.000

On comparing the types of confiding, practical and negative support received by the respondent from spouse and non-spouse (any place) a significant association was found in all three types of support (table 3.3). However, the association was far more significant for practical and negative aspects of support than for confiding support. When closest and second close persons categories are reorganised to reflect spouse and non-spouse support, table 3.3 shows that a higher level of support was received from spouses as compared to non-spouses for both confiding and practical support. As in

the case of closest person a higher level of negative support was scored by spouses as compared to non-spouses indicating that spouses provided more negative support such as anxiety and worries than non-spouses such as relatives, neighbours and friends. This was not surprising as discussed earlier most of the closest persons were spouses.

TABLE 3.3: TYPES OF SUPPORT FROM SPOUSE AND NON-SPOUSE (ANY PLACE)

SUPPORT FROM SPOUSE (ANY PLACE)	FREQUENCY OF SUPPORT FROM **SPOUSE** N=643 (%)	FREQUENCY OF SUPPORT FROM **NON-SPOUSE** N=498 (%)	p VALUE
CONFIDING			
LOW	47 (7.3)	55 (11.0)	Chi Square = 4.45
HIGH	586 (92.7)	443 (89.0)	p= 0.03
PRACTICAL			
LOW	105 (16.3)	214 (43.0)	Chi Square = 98.90
HIGH	538 (83.7)	284 (57.0)	p= 0.000
NEGATIVE			
LOW	155 (24.1)	241 (48.4)	Chi Square = 73.06
HIGH	488 (75.9)	257 (51.6)	p= 0.000

3.2.3 Social support and socio-demographic characteristics of the respondents

3.2.3.1 Educational status of respondents and husbands

A significant association was seen between levels of confiding support received from the closest person and respondent's education. Table 3.4 shows that women with higher educational status receive higher levels of confiding support from the closest person and confiding and practical support from the second close person (table 3.5).

TABLE 3.4: SOCIAL SUPPORT FROM CLOSEST PERSON BY RESPONDENTS EDUCATIONAL STATUS

Social Support	Respondents Education N=660					
Social support	Level of social support	No Formal Schooling	Below Matric	Matric	Post Matric	p value
Confiding Support	LOW	32 (10.1)	14 (4.7)	1 (3.4)	-	chi square = 7.72
	HIGH	286 (89.9)	286 (95.3)	28 (96.6)	13 (100.0)	p = 0.005
Practical Support	LOW	73 (23.0)	65 (21.7)	6 (20.7)	1 (7.7)	chi square = 1.03
	HIGH	245 (77.0)	235 (78.3)	23 (79.3)	12 (92.3)	p = 0.30
Negative Support	LOW	115 (36.2)	91 (30.3)	11 (37.9)	2 (15.4)	chi square = 2.48
	HIGH	203 (63.8)	209 (69.7)	18 (62.1)	11 (84.6)	p = 0.11

TABLE 3.5: SOCIAL SUPPORT FROM SECOND CLOSE PERSON BY RESPONDENTS EDUCATIONAL STATUS

Social Support	Respondents Education N=660					
Social Support	Level of Social Support	No Formal Schooling	Below Matric	Matric	Post Matric	p value
N.A N=149		93 (62.4)	45 (30.3)	9 (6.0)	2 (1.3)	
Confiding Support	LOW	69 (30.7)	40 (15.7)	4 (20.0)	1 (9.1)	chi square = 12.67
	HIGH	156 (69.3)	215 (84.3)	16 (80.0)	10 (90.9)	p = 0.000
Practical Support	LOW	99 (44.0)	105 (41.2)	7 (35.0)	1 (9.1)	chi square = 3.66
	HIGH	126 (56.0)	150 (58.8)	13 (65.0)	10 (90.9)	p = 0.05
Negative Support	LOW	140 (62.2)	143 (56.1)	12 (60.0)	7 (63.6)	chi square = 0.63
	HIGH	85 (37.8)	112 (43.9)	8 (40.0)	4 (36.4)	p = 0.42

compared to non-spouses indicating that spouses provided more negative support such as anxiety and worries than non-spouses such as relatives, neighbours and friends. This was not surprising as discussed earlier most of the closest persons were spouses.

TABLE 3.3: TYPES OF SUPPORT FROM SPOUSE AND NON-SPOUSE (ANY PLACE)

SUPPORT FROM SPOUSE (ANY PLACE)	FREQUENCY OF SUPPORT FROM **SPOUSE** N=643 (%)	FREQUENCY OF SUPPORT FROM **NON-SPOUSE** N=498 (%)	p VALUE
CONFIDING			
LOW	47 (7.3)	55 (11.0)	Chi Square = 4.45
HIGH	586 (92.7)	443 (89.0)	p= 0.03
PRACTICAL			
LOW	105 (16.3)	214 (43.0)	Chi Square = 98.90
HIGH	538 (83.7)	284 (57.0)	p= 0.000
NEGATIVE			
LOW	155 (24.1)	241 (48.4)	Chi Square = 73.06
HIGH	488 (75.9)	257 (51.6)	p= 0.000

3.2.3 Social support and socio-demographic characteristics of the respondents

3.2.3.1 Educational status of respondents and husbands

A significant association was seen between levels of confiding support received from the closest person and respondent's education. Table 3.4 shows that women with higher educational status receive higher levels of confiding support from the closest person and confiding and practical support from the second close person (table 3.5). Similarly respondents with spouses who had schooling were more likely to receive higher levels of confiding support from closest and second close person (tables 3.6 & 3.7).

TABLE 3.6: SOCIAL SUPPORT FROM CLOSEST PERSON BY HUSBANDS EDUCATIONAL STATUS

Social Support From Closest Person	Husbands Educational Status N = 642						
Social Support from Closest Person	Level of Support	No Formal Schooling	Below Matric	Matric	Post-Matric	Don't Know	p value
Confiding Support	LOW	16 (12.8)	21 (6.1)	7 (6.1)	2 (2.9)	-	chi square = 6.32
	HIGH	109 (87.2)	322 (93.9)	109 (93.9)	66 (97.1)	3 (100.0)	p = 0.01
Practical Support	LOW	35 (28.0)	63 (18.4)	33 (28.4)	13 (19.0)	-	chi square = 0.39
	HIGH	90 (72.0)	280 (81.6)	83 (71.6)	55 (81.0)	3 (100.0)	p = 0.52
Negative Support	LOW	48 (38.4)	110 (32.1)	42 (36.2)	17 (25.0)	-	chi square = 2.50
	HIGH	77 (61.6)	233 (67.9)	74 (63.8)	51 (75.0)	3 (100.0)	p = 0.10

TABLE 3.7: SOCIAL SUPPORT FROM SECOND CLOSE PERSON BY HUSBANDS EDUCATIONAL STATUS

Social Support From 2nd Closest Person	Husbands Educational Status N = 655						
Social Support from 2nd Closest Person	Level of Social Support	No Formal Schooling N=125	Below Matric N=343	Matric N=116	Post-Matric N=68	Don't Know N=3	p value
N.A N = 148		35 (23.7)	74 (50.0)	23 (15.5)	15 (10.1)	1 (0.7)	
Confiding Support	LOW	26 (28.9)	64 (23.8)	11 (11.8)	12 (22.6)	-	chi square= 4.19
	HIGH	64 (71.1)	205 (76.2)	82 (88.2)	41 (77.4)	2 (100.0)	p = 0.04
Practical Support	LOW	32 (35.5)	121 (45.0)	37 (39.8)	19 (35.8)	1 (50.0)	chi square= 0.02
	HIGH	58 (64.5)	148 (55.0)	56 (60.2)	34 (64.2)	1 (50.0)	p = 0.86
Negative Support	LOW	50 (55.5)	173 (64.3)	47 (50.5)	27 (51.0)	2 (100.0)	chi square = 1.24
	HIGH	40 (44.5)	96 (35.7)	46 (49.5)	26 (49.0)	-	p = 0.26

TABLE 3.8: SOCIAL SUPPORT FROM CLOSEST PERSON BY RESPONDENTS OCCUPATION

Social Support from Closest Person	Respondents Occupation N = 660					
Social Support from Closest Person	Level of Social Support	N.A N = 520	Occasional Work N = 20	Full & Part Time Informal N = 94	Full & Part Time Formal N = 26	p value
Confiding Support	LOW	28 (5.4)	-	15 (16.0)	4 (12.5)	chi square = 13.96
	HIGH	492 (94.6)	20 (100.0)	79 (84.0)	28 (87.5)	p = 0.000
Practical Support	LOW	93 (17.9)	10 (50.0)	34 (36.2)	8 (30.8)	chi square = 17.65
	HIGH	427 (82.1)	10 (50.0)	60 (63.8)	18 (69.2)	p = 0.000
Negative Support	LOW	154 (29.6)	8 (40.0)	47 (50.0)	10 (38.5)	chi square = 12.24
	HIGH	366 (70.4)	12 (60.0)	47 (50.0)	16 (61.5)	p = 0.000

TABLE 3.9: SOCIAL SUPPORT FROM SECOND CLOSE PERSON BY RESPONDENTS OCCUPATION

Social Support from 2nd Close Person	Respondents Occupation N=660					
Social Support from 2nd Close Person	Level of Social Support	N.A N = 520	Occasional Work N = 20	Full & Part Time Informal N = 94	Full & Part Time Formal N = 26	p value
N.A N=149		123 (82.6)	6 (4.0)	17 (11.4)	3 (2.0)	
Confiding Support	LOW	86 (21.7)	4 (28.5)	17 (22.1)	7 (30.4)	chi square = 0.24 p = 0.62
	HIGH	311 (78.3)	10 (71.5)	60 (77.9)	16 (69.6)	
Practical Support	LOW	147 (37.0)	6 (42.8)	45 (58.4)	14 (60.9)	chi square = 11.01 p = 0.000
	HIGH	250 (63.0)	8 (57.2)	32 (41.6)	9 (39.1)	
Negative Support	LOW	228 (57.4)	6 (42.8)	53 (68.8)	15 (65.2)	chi square = 0.45 p = 0.50
	HIGH	169 (42.6)	8 (57.1)	24 (31.2)	8 (34.8)	

TABLE 3.10: SOCIAL SUPPORT FROM CLOSEST PERSON BY FAMILY MONTHLY INCOME

Social Support From Closest Person	Family Monthly Income N=659					
Social Support from Closest Person	Level of Social Support	Less than Rupees 1000 N = 186	Rupees 1000 to Rupees 3000 N = 443	More than Rupees 3000 N = 23	Don't Know N = 7	p value
Confiding Support	LOW	17 (9.1)	26 (5.9)	1 (4.3)	2 (28.6)	chi square = 0.193
	HIGH	169 (90.9)	417 (94.1)	22 (95.7)	5 (71.4)	p = 0.66
Practical Support	LOW	57 (30.6)	85 (19.2)	2 (8.7)	1 (12.3)	chi square = 11.69
	HIGH	129 (69.4)	358 (80.8)	21 (91.3)	6 (87.7)	p = 0.000
Negative Support	LOW	82 (44.1)	131 (29.6)	3 (13.0)	2 (28.6)	chi square = 14.46
	HIGH	104 (55.9)	312 (70.4)	20 (87.0)	5 (71.4)	p = 0.000

TABLE 3.11: SOCIAL SUPPORT FROM SECOND CLOSE PERSON BY FAMILY MONTHLY INCOME

Social Support From 2nd Closest Person	Family Monthly Income N = 659					
Social Support from 2nd Closest Person	Level of Social Support	Less than Rupees 1000 N=186	Rupees 1000 to Rupees 3000 N=443	More than Rupees 3000 N=23	Don't Know N=7	p value
N.A N = 148		59 (39.9)	81 (54.7)	4 (2.7)	4 (2.7)	
Confiding Support	LOW	41 (32.3)	70 (19.3)	2 (10.5)	1 (33.3)	chi square = 8.48
	HIGH	86 (67.7)	292 (80.7)	17 (89.5)	2 (66.7)	p = 0.003
Practical Support	LOW	54 (42.5)	153 (42.3)	4 (21.1)	1 (33.3)	chi square = 0.96
	HIGH	73 (57.5)	209 (57.7)	15 (78.9)	2 (66.7)	p = 0.32
Negative Support	LOW	73 (57.5)	221 (61.0)	7 (36.8)	1 (33.3)	chi square = 11.18
	HIGH	54 (42.5)	141 (39.0)	12 (63.2)	2 (66.7)	p = 0.000

3.2.4 Types of social networks available from close persons

The social network section sought to collect information on the frequency and number of friends, relatives and colleagues available to the respondents, the level of communication maintained with friends and relatives through letters, attendance at religious services and clubs/organisations and the frequency of inviting people for meals. Table 3.12 summarises some of the social networks available to the respondents. 87.6 % of the respondents said that between 1-10 friends and relatives were available to them when required for frank talk.

Table 3.12 also illustrates that 83.4% of the respondents said that they visited their relatives from daily to once every few months. Even though most of the respondents were migrants from rural Maharashtra or other parts of the country (see table 2.2) they kept contact with their families. This could be because the Thane migrants were relatively fresh migrants (see section 3.1.1.4) in the young to middle aged group who had older parents and siblings and family land to support in their homes. 79.9% of the respondents did not work for wages. Of those who worked, 14.2% said they never met their co-workers socially. As only 23 (3.5%) of the 660 women had full-time formal jobs the low response for meeting co-workers is understandable. Table 3.12 further shows the frequency of respondents of visiting friends. On enquiring about number of friends seen each month nearly half (47.9%) said that they did not see any friends. On seeking information on respondents' contact with friends and relatives through letters, it was interesting to note that 50.9% of the women said that they were not in contact through letters -a figure almost comparable to the percentage of respondents who had

no formal education (48.2%). Of those who said that they did keep contact through letters many women had mentioned that their husbands wrote the letters as they were either illiterate or not confident of their writing skills.

TABLE 3.12: SOCIAL NETWORKS OF RESPONDENTS

SOCIAL NETWORKS AVAILABLE	ATTRIBUTE	FREQUENCY OF RESPONSES N=660 (%)
NUMBER OF RELATIVES, FRIENDS AVAILABLE FOR FRANK TALK	NONE 1 TO 2 3 TO 5 6 TO 10 MORE THAN 10	82 (12.4) 302 (45.8) 240 (36.4) 25 (3.8) 11 (1.8)
FREQUENCY OF VISITING RELATIVES	ALMOST DAILY ONCE/WEEK ONCE/MONTH ONCE EVERY FEW MONTHS NEVER/ALMOST NEVER NO RELATIVES & MISSING	48 (7.3) 72 (10.9) 130 (19.7) 300 (45.5) 74 (11.3) 36 (5.3)
FREQUENCY OF VISITING FRIENDS	ALMOST DAILY ONCE/WEEK ONCE/MONTH ONCE EVERY FEW MONTHS NEVER/ALMOST NEVER & MISSING	95 (14.4) 50 (7.6) 126 (19.1) 158 (23.9) 231(35.0)
NUMBER OF FRIENDS SEEN PER MONTH	NONE 1 TO 2 3 TO 5 6 TO 10 MISSING	316 (47.9) 278 (42.1) 53 (8.0) 10 (1.5) 3 (0.5)
FREQUENCY OF CONTACT WITH FRIENDS BY LETTER	ONCE/WEEK ONCE/MONTH ONCE EVERY FEW MONTHS NEVER/ALMOST NEVER MISSING	11 (1.7) 45 (6.8) 266 (40.3) 338 (50.9) 2 (0.3)
FREQUENCY OF ATTENDANCE OF RELIGIOUS SERVICES	ALMOST DAILY ONCE/WEEK ONCE/MONTH ONCE EVERY FEW MONTHS NEVER/ALMOST NEVER MISSING	3 (0.5) 11 (1.7) 13 (2.0) 505 (76.4) 128 (19.0) 3 (0.4)
FREQUENCY OF INVITING PEOPLE FOR MEALS	ALMOST DAILY ONCE/WEEK ONCE/MONTH ONCE EVERY FEW MONTHS MISSING	33 (5.0) 145 (22.0) 331 (50.2) 149 (22.5) 2 (0.3)

Over 70% of the women attended religious services. However, 96.4% of the respondents reported that they did not participate in any voluntary work. Further, only 4.2% of the respondents were members of any club or organisation such as 'mahila mandals', 'bhajan mandals' etc. It is seen that almost all the respondents invited people for meals.

The findings that most of the women attended religious services is not surprising as most women are socialised to organise and participate in religious ceremonies from an early age. In fact there are some religious ceremonies (haldi kum kum) which are meant exclusively for girls and women. Thus, religious services are one social activity where women are given social sanction for attendance -alone or with family members. Similarly inviting people for meals is a traditional act of hospitality which is accepted and continued by the women and their families. However participating in voluntary work though more acceptable for older women who are less occupied in household chores is a difficult task for the younger women who have to look after the home and young children. In addition most of the women if they have spare time, work for wages to supplement the family income. Very few women are members of clubs or organisations for the same reasons cited above and also as there is only one voluntary organisation which provides these facilities in the area. Thus activities which are not religious or do not have monetary returns are not attended by the women.

3.2.5 Social networks and socio-demographic characteristics of the respondents

The two social network scales formed by Stansfeld and Marmot (1992) were used (with slight modification) to explore the association between social networks and other variables. The measures for the two scales[2] -'beyond the household scale' and 'isolation scale' and the scoring methods used to scale them are described at appendix G.

3.2.5.1 Educational status of respondents and husbands

A significant association was seen between respondent's educational status and the two social network scales. Table 3.13 shows that respondent's with schooling and/ or higher levels of schooling were likely to have a good network scale in 'beyond the household' scale. In the isolation scale it is seen (table 3.13), women with no formal schooling and/or lower levels of schooling were more likely to be isolated than those with schooling and/or higher levels of schooling.

There was no significant association between husband's educational status and the two social network scales.

[2] The **'isolation scale'** measures the availability of relatives, work colleagues, friends, attendance at mandals and religious ceremonies and **'beyond the household scale'** measures the frequency of meeting these people and attending mandals and religious ceremonies. For more details see appendix G.

TABLE 3.13: SOCIAL NETWORK BY RESPONDENTS EDUCATIONAL STATUS

Social Network Scale	Respondents Education					
Social Network Scale	Level of Scale	No Formal Schooling	Below Matric	Matric0	Post Matric	p value
Beyond the Household Scale N=647	LOW (poor network) HIGH (good network)	214 (69.3) 95 (30.7)	179 (60.0) 119 (40.0)	14 (51.8) 13 (48.2)	7 (53.8) 6 (46.2)	chi square = 7.44 p = 0.006
Isolation Scale N=660	LOW (less isolated) HIGH (more isolated)	192 (60.4) 126 (39.6)	237 (79.0) 63 (21.0)	24 (82.7) 5 (17.3)	10 (76.9) 3 (23.1)	chi square = 21.59 p = 0.000

3.2.5.2 Occupational status of respondents

A significant association was seen between the isolation scale and respondent's occupation. Table 3.14 shows that women who are working for wages are likely to be more isolated than those not working for wages. However, there was no significant association between respondent's occupation and the household scale.

3.2.5.3 Family monthly income of respondents

There is a very significant association between the two social network scales and the respondent's monthly family income. Table 3.15 shows that women with higher family income are less likely to be isolated or have a poor social network than those with lower family incomes.

3.2.6 Summary of main results

- All the respondents nominated a closest person and 77.4% nominated a second close person.
- 65.6% and 18.8% respondents nominated their spouse as the closest and second close person respectively.
- As a large number of spouses were nominated as closest or second close person, most of the close persons were currently married, had stayed with the respondent for over 11 years and respondents 'had seen close person' for 26 days or more in that year.

TABLE 3.14: SOCIAL NETWORK BY RESPONDENTS OCCUPATION

Social Network Scales	Respondents Occupation N=660					
Social Network Scales	Level of Scale	N.A N = 520	Occasional Work N = 20	Full & Part Time Informal N = 94	Full & Part Time Formal N = 26	p value
Beyond the Household Scale N=647	LOW (poor network)	329 (63.9)	12 (66.7)	60 (67.4)	13 (52.0)	chi square = 0.05 p = 0.82
	HIGH (good network)	186 (36.1)	6 (33.3)	29 (32.6)	12 (48.0)	
Isolation Scale N=660	LOW (less isolated)	405 (77.9)	9 (45.0)	37 (39.4)	12 (46.1)	chi square = 62.79 p = 0.000
	HIGH (more isolated)	115 (22.1)	11 (55.0)	57 (60.6)	14 (53.9)	

TABLE 3.15: SOCIAL NETWORK AND FAMILY MONTHLY INCOME

Social Network Scale		Monthly Family Income				
Network Scale	Level of scale	Less than Rupees 1000	Rupees 1000 to Rupees 3000	More than Rupees 3000	Don't Know	p value
Beyond the Household Scale N=647	LOW (poor network)	130 (71.8)	270 (61.8)	10 (45.4)	4 (57.1)	chi square = 8.06 p = 0.004
	HIGH (good network)	51 (28.2)	167 (38.2)	12 (54.6)	3 (42.9)	
Isolation Scale N=659	LOW (less isolated)	112 (60.2)	324 (73.1)	20 (87.0)	6 (85.7)	chi square = 14.01 p = 0.000
	HIGH (more isolated)	74 (39.8)	119 (26.9)	3 (13.0)	1 (14.3)	

- A higher proportion of respondents receive high levels of confiding and practical social support from closest and from second close persons. In case of negative support, more respondents receive high level of support from closest persons (a negative finding) but low negative support from second close persons, which is a positive finding.
- More respondents receive high level of support from spouse and non-spouse for all three types of support. In case of confiding and practical support, this is a positive finding, but in case of negative support it is a negative finding, indicating that respondents receive more worries and anxieties. A higher level of negative support is received from spouses compared to non-spouses.

  Thus higher levels of negative support are received from spouses and closest persons. This is not surprising as the majority of persons nominated as closest persons are spouses.
- 87.6% of respondents said that 1 to 10 persons were available for frank talk, over 70% attended religious services and almost all the respondents invited people for meals. 83.4% respondents visited relatives either daily, weekly, monthly or once every few months.
- 96.4% of respondents did not participate in any voluntary work and only 4.2% respondents were members of clubs or organisations.
- 20.1% of the respondents worked for wages. However only 3.5% of these worked in full-time formal occupations, the majority being employed as domestic workers or on daily wages.
- Women with formal schooling and/or higher educational status receive higher levels of confiding support from closest person and confiding and practical support from

second close person than those without schooling.

- Respondents whose husbands had formal schooling receive higher levels of confiding support from closest and second close person.
- Women who work for wages receive moderate to high levels of confiding support and low levels of negative (good thing) and practical support (not good) from closest person, and low level of practical support from second close person.
- Women with higher family income receive higher practical support and more negative comments from closest person and higher confiding support from second close person. Women with family monthly incomes higher than 3000 rupees also receive fewer negative comments from second close persons.
- Women with schooling and/or higher levels of schooling have good social networks beyond the household. Women with no schooling and/or lower level of schooling are more isolated than those with schooling and/or higher level of schooling.
- Husbands' educational status has no association with the social networks of the respondent.
- Women who work for wages are more isolated than those not working for wages. However womens' work status is not associated with the social networks beyond the household.
- Women with higher family income have a better social network beyond the household and are less isolated than those with lower family incomes.

3.3 GYNAECOLOGICAL MORBIDITY

To understand the 'world view'/social context of the women as related to women's health in general and gynaecological morbidity[3] in particular besides the survey questionnaire, in-depth interviews were conducted with key informants. Rapid assessment procedures of free listing, ranking and body mapping were used to aid data collection during the in-depth interviews with key informants. This combination of methods provided a framework of the women's view of gynaecological morbidity, what they perceived as serious and why - as related to their lives; and knowledge about their bodies as related to certain body functions and reported illnesses. The last provided a scale to understand how women perceived their illnesses and the beliefs and etiological factors which made them seek allopathic or alternative forms of treatment.

Table 3.16 summarises the socio-demographic characteristics of the 36 key informants with whom in-depth interviews were conducted to collect information on perception and experience of gynaecological morbidity.

[3]Both in the survey and in-depth interviews, gynaecological symptoms reported by the women are analyzed to denote gynaecological morbidity in women. Therefore, in this study gynaecological symptoms will be referred to as **gynaecological morbidity**. Minor psychiatric morbidities assessed by the SRQ 20 will be referred to as **psychiatric morbidity** for uniformity.

TABLE 3.16: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF KEY INFORMANTS

SOCIO-DEMOGRAPHIC VARIABLE	ATTRIBUTE	FREQUENCY OF RESPONSES (%) N=36
RESIDENCE	RAMNAGAR C.P. TALAO KAILASH NAGAR	10 (27.8) 10 (27.8) 16 (44.4)
ETHNICITY	MAHARASHTRIAN OTHER	21 (58.3) 15 (41.7)
RELIGION	HINDU BAUDH OTHER	24 (66.7) 8 (22.3) 4 (11.0)
AGE (IN YEARS)	18 - 25 26 - 33 34 - 41	7 (19.4) 24 (66.7) 5 (13.9)
PLACE OF BIRTH	URBAN RURAL	13 (36.1) 23 (63.9)
EDUCATION	NO FORMAL SCHOOLING BELOW MATRIC	12 (33.3) 24 (66.7)
OCCUPATION	NONE/HOUSEWIFE INFORMAL FORMAL	25 (69.4) 9 (25.0) 2 (5.6)
INCOME (IN RUPEES)	< 1000 1000-3000 > 3000	10 (27.8) 24 (66.7) 2 (5.5)
LENGTH OF RESIDENCE IN COMMUNITY	0 - 5 YRS 6 - 10 YRS 11 - 15 YRS => 16 YRS	14 (38.9) 11 (30.6) 7 (19.4) 4 (11.1)
STERILIZATION HISTORY	STERILIZED NOT STERILIZED	24 (66.7) 12 (33.3)
HUSBAND'S OCCUPATION	NONE REGULAR EMPLOYMENT DAILY LABOURER OWN BUSINESS	3 (8.3) 13 (36.2) 16 (44.4) 4 (11.1)

3.3.1 Respondent's perspective of women's illnesses

Free listing of women's illnesses provided an inner view of what the women themselves perceived as 'women's illnesses'. Other issues which arose during free listing such as reluctance to name certain illnesses, or to discuss the different kinds/types of illnesses prevalent amongst the community women, provided an understanding of the cultural view and culturally prescribed norms regarding these illnesses. Though the women resided in urban areas where social pressures to maintain traditional taboos and stigma (notions of pollution) were comparatively less (due to pressures of urban life and change from the traditional extended family system to nuclear families and consequent change in social support and networks) the cultural silence surrounding women's illnesses was very much prevalent as discussed below.

During free listing, the key informants were asked to verbally list as many women's illnesses as they had heard, read, seen or experienced amongst women.

Though the women spontaneously discussed the illnesses experienced by them, very few reported women's illnesses (general) spontaneously. Only the women leaders reported illnesses generally seen in women, without prompting. All the other key informants had to be prompted to list illnesses in women. Some women replied in part while others could not free list at all. The women were reluctant to list certain illnesses as they thought that these (illnesses) were 'dirty'. The women had been socialised (by mothers, older sisters and older women in the family and community) from an early age to perceive these illnesses as dirty and shameful and not to be discussed with others. Illnesses which came

under this category were almost all the gynaecological morbidity conditions. As some of the women said on being prompted with a few examples of illnesses in women,

"I am too busy with my own work to bother with illnesses that other women have".

"God knows (illnesses that women have)'.'

"I don't talk about such things with other women. I don't know about such things (prolapse, dyspareunia)".

Women were willing to talk about backache, waist pain related to lower abdominal pain but not the lower abdominal pain itself. In case of dyspareunia too the women would report 'burning below' and discussed it further only on probing/prompting. The reasons for this can be clearly understood in the following explanation given by a respondent for her symptoms

Case 1:

She was a 29 year old Telugu speaking woman, educated up to class 7, not working for wages, with two young children and living in the zhopadpatti for 9 years. She reported menstrual pain and white discharge in the survey.

"First I have pain. It pains during 'pali' (menstruation), 'safed pani' (white discharge) goes always -for most of the month. Elders say that because that (safed pani) goes, waist pains (she initially complained only of waist pain). Some (women) say, because of that (safed pani) waist becomes 'dheela' (loose). Because of that it pains more but until now nothing like that has happened. Cannot work. If I wash more clothes and

vessels sitting down (on haunches) then it pains. It is only that. Also I feel wet because of continuous 'safed pani' -only that, and it pains during 'pali' I cannot go anywhere for 5 days -it pains too much. On taking tablets it stops for 1-2 hours and starts again''.

Thus women talked of manifestation of the illness/symptom more readily than the illness/symptom itself. White or red discharge was reported as 'weakness' initially. On probing the women would say that maybe the weakness was due to the vaginal discharge.

The illnesses/symptoms perceived by the women as 'women's illnesses' ranged from red and white discharge, prolapse, stomachache, body pain, back pain, headache to weakness, fear and 'mental tension'.

3.3.2 Beliefs and causes of women's illnesses

Ranking of women's illnesses reported by a majority of the women during free listing provided an understanding of women's notions of serious illnesses and the beliefs underlying these notions.

The illnesses that were ranked by the women were

-'safed pani' or'anga varcha jana' (white discharge)

-'lal pani' (red discharge)

-'ang baher yene' (prolapse)

-'autipot dukne' (lower abdominal pain)

-'haat pai gola hone' (numbness of hands and feet)

-'kamjori' (weakness/fatigue)

-'path dukne' (backache),

-'sar dukhne' (headache)

-'ardha sar dukhne' (half headache)

-'haath pai dukhne' (hands and leg pain)

-'pot dukne' (stomachache)

-'kamar dukne' (waist pain)

-'shaati dukne' (chest pain)

The ranking of these symptoms/illnesses in order of seriousness (women's perception) are given in table 3.17.

Table 3.17 shows that the women rank (by total mentions and seriousness) prolapse, stomach pain, white discharge, waist pain, lower abdominal pain and weakness as the most serious illnesses.

Women ranked illnesses/symptoms as serious based on their own cultural/ethnoetiological definition of health; feeling of 'overall well-being'- that is the extent the symptoms interfere with their daily lives and their own perceptions of 'normalcy' ('all women have discharge'), and not as defined by health providers as per the bio-medical model. Thus **stomach pain** is perceived as more serious than severe lower abdominal pain as it (the stomach) is perceived to be the basis/root for further illnesses. That is stomach pain can lead to other illnesses (more serious) if left untreated.

TABLE 3.17: RANKING OF WOMEN'S ILLNESS/ SYMPTOMS BY KEY INFORMANTS

WOMEN'S ILLNESS/ SYMPTOMS	RANKING BY 'TOTAL MENTIONS' OF ILLNESS BY K.I N=36 (%)	RANKING BY ORDER OF SYMPTOMS
'Something heavy down below'	21(80.8)	Serious 13(62.0) Fairly serious 6(28.5) Not so serious 2(9.5)
Stomach pain	19(73.1)	Serious 11(57.8) Fairly serious 4(21.1) Not so serious 4(21.1)
White Discharge	18(69.2)	Serious 10(55.6) Fairly serious 4(22.2) Not so serious 4(22.2)
Waist pain	18(69.2)	Serious 7(38.9) Fairly serious 4(22.2) Not so serious 7(38.9)
Red Discharge	16(61.5)	Serious 10(62.5) Fairly serious 4(25.0) Not so serious 2(12.5)
'Lower Abdominal Pain'	16(61.5)	Serious 2(12.5) Fairly serious 10(62.5) Not so serious 4(25.0)
Weakness	14(53.8)	Serious 6(42.9) Fairly serious 5(35.7) Not so serious 3(21.4)
Half head-ache	13(50.0)	Serious 1(7.7) Fairly serious 2(15.4) Not so serious 10(76.9)
'Numbnesss/Cramps in Hands and Feet'	12(46.2)	Serious 2(16.3) Fairly serious 6(50.0) Not so serious 4(33.7)

TABLE 3.17 continued

WOMEN's ILLNESS/ SYMPTOMS	RANKING BY 'TOTAL MENTIONS' OF ILLNESS BY K.I. N = 36 (%)	RANKING BY ORDER OF SYMPTOMS
'Pain in chest'	12(46.1)	Serious 5(41.7) Fairly serious 4(33.3) Not so serious 3(25.0)
Back pain	10(38.5)	Serious Fairly serious 3(30.0) Not so serious 7(70.0)
Headache	10(38.5)	Serious 1(10.0) Fairly serious 4(40.0) Not so serious 5(50.0)
Hands and Legs pain/ body ache	4(15.4)	Serious Fairly serious 1(25.0) Not so serious 3(75.0)

* MULTIPLE RESPONSES
Ranking of illnesses: 1 to 3: Serious
4 to 6: Fairly Serious
7 to 13: Not so Serious

Weakness was perceived as serious as

'a weak body is fertile ground for other illnesses'

Similarly **waist pain** is seen as a symptom/sign of illness in the uterus and so perceived as serious. Comparatively fewer women perceived **lower abdominal pain** as serious even though the highest number reported its presence (RTIs) in the survey (table 3.18). It is seen as a consequence of wear and tear of a hard life burdened by bearing of children, heavy work and inadequate rest and food.

For the same reason, chest pain, headaches, body pain, numbness in hands and feet and back pain, though perceived as troublesome as they interfere in daily life are seen as a natural consequence of 'the heavy burden of work' in their lives.

TABLE 3.18: FREQUENCY OF MORBIDITY SYMPTOMS REPORTED BY K.I. DURING SURVEY INTERVIEW

MORBIDITY SYMPTOMS REPORTED BY WOMEN	FREQUENCY OF SYMPTOMS N= 36 * (%)
Menstrual problems	22 (61.1)
Reproductive tract infections	23 (63.9)
Prolapse	17 (47.2)
Dyspareunia	9 (25.0)
Urinary problems	12 (33.3)
Infertility	3 (8.3)
Abortion morbidity	1 (2.8)
I U D morbidity	1 (2.8)

* Multiple responses

White discharge is seen as 'normal' in married women as it occurs due to frequent intercourse, heavy work such as lifting/carrying water pots and as a consequence of sterilisation. However, the women perceive heavy and frequent white discharge as 'dangerous' as it leads to cancer. **Red discharge** (frequent) can also lead to 'rotting of the uterus' and is therefore perceived as serious.

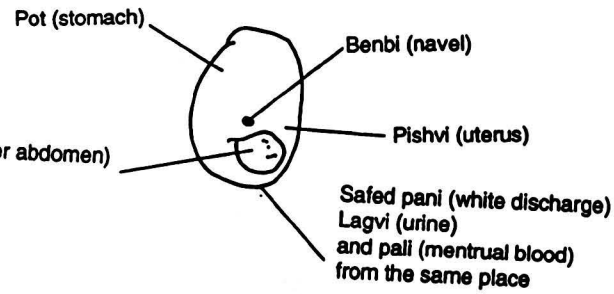
The above section clearly illustrates women's cultural perspective and ethno-etiological beliefs regarding seriousness of various women's illnesses.

Besides verbally discussing the symptoms experienced by them, the researcher used body mapping with the key informants to gain access to the women's perception of their bodies and to the explanatory models which the women brought into their encounters when seeking treatment. The mapping was restricted to those body parts where the women reported pain/symptom eg. the uterus, lower abdomen, vagina etc. Body mapping was undertaken as it is today recognised that there are different ways in which people within a culture or community gain, hold or use knowledge about bodily processes (Cornwall, 1992). The researcher sought through listening to people's accounts of their bodies and their interpretations of allopathic interventions to understand their own perceptions and experience of reported gynaecological symptoms. As Cornwall (1992) says ''people's knowledge about their bodies is difficult to access from verbal descriptions without prior knowledge of the terms of reference used. Particularly in the case of anatomical terms, assumptions of a shared meaning for terms such as 'womb' or 'heart' may mislead.'' Further biases and assumptions can enter the encounter if specific questions are asked from a western medical frame of reference - undermining people's confidence in what they know.

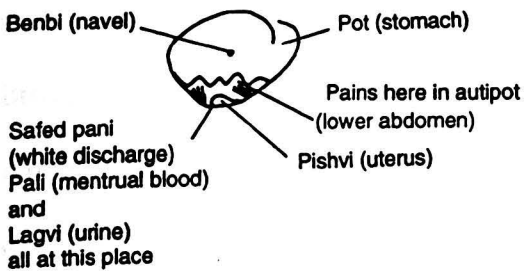
During the discussions following the 'map' drawing it became clear that women's descriptions of their bodies often differed significantly from the Western scientific version. Figure 3.5 shows a few of the body maps drawn by the women. By

Figure 3.5

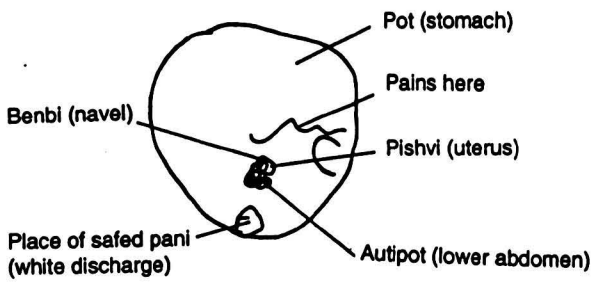
BODY MAPS - Some examples of reporting of gynaecological morbidity



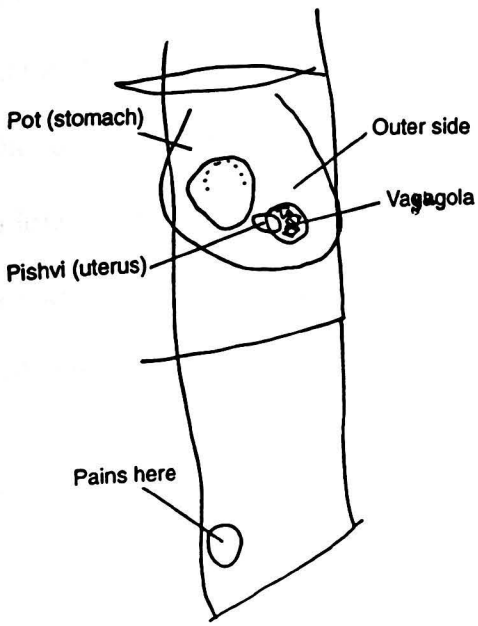
Drawn by a 30 year old Buddist Maharashtrian woman living for 17 years in Ramnagar Zhopadpatti educated up to class 7, not working for wages and reporting menstrual problems.



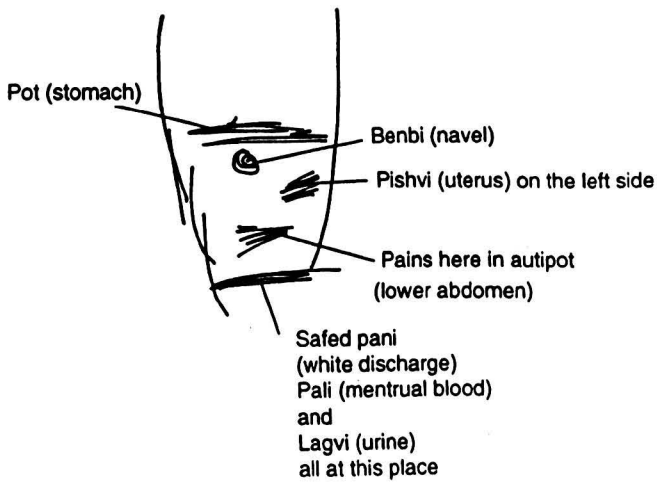
Drawn by a 32 year old Hindu Maharashtrian woman with no formal schooling, living for 18 years in Kailash Nagar Zhopadpatti, not working for wages and reporting white discharge with itching and odour.



Drawn by a 30 year old Buddist Maharashtrian woman living for 15 years in Kailash Nagar Zhopadpatti, educated up to class 8, not working for wages and reporting RTIs and urinary problems.



Drawn by a 26 year old Maharashtrian woman educated up to class 3, living for 26 years in Ramnagar Zhopadpatti, working as a domestic worker and reporting dispareunia.



Drawn by a 30 year old Hindu Maharashtrian woman educated up to primary school, living for 12 years in C.P. Talao Zhopadpatti, working in the local fish factory and reporting mentrual problems.

first asking the women to locate the body parts under discussion, such as the stomach, the uterus, lower abdomen and vaginal openings and then discussing the locus of pain and its effect on the women (as in the case of lower abdominal pain) it was possible to understand the location of the pain as well as the difference in the two explanatory models (the western and cultural). This helped to seek a clearer understanding of the causal factors and management of the reported morbidity from the emic perspective (woman's) rather than the etic (health providers- or the bio-medical). For example, most women reported that vaginal discharge, menstrual blood and urine all flowed through the same place, and that presence of 'vayugola' (ball of wind) after delivery/pregnancy accounted for severe pain in the lower abdomen for 4-5 days after abortion or delivery and sometimes for longer.

This information has implications for how health education provided by health providers is interpreted by the women to understand, accept and seek treatment for the morbidities. As in the case of 'vayugola' women would ignore the pain or seek herbal/home treatment as the pain is perceived to be 'normal' (the uterus searching for the foetus -its companion/play mate of the last few months). Pain which persisted over a long period of time was believed/explained to be a result of the women not lying in a particular position after delivery. However the pain could be due to a reproductive infection which if ignored could spread and have severe sequelae (as in a lower RTI).

3.3.3 Emic perspective of gynaecological morbidity

A little more than half (50.6%) the women reported the presence of at least one gynaecological morbidity in the survey. As seen in table 3.19, 33% of the women reported reproductive tract infections (RTIs) - both upper and lower. The next largest number reported menstrual problems (26.4%) which ranged from severe pain in abdomen, spotting between menstrual cycles to heavy bleeding and amenorrhoea.

TABLE 3.19: FREQUENCY OF DIFFERENT GYNAECOLOGICAL MORBIDITIES

GYNAECOLOGICAL MORBIDITY	FREQUENCY OF MORBIDITY N = 660 (%) *
Reproductive tract infection	218 (33.0)
Menstrual problems	174 (26.4)
Urinary infection	92 (13.9)
Prolapse	80 (12.1)
Infertility	35 (5.3)
Dispareunia	17 (2.6)
Abortion morbidity	9 (1.4)
IUD morbidity	2 (0.3)

* Multiple responses

Of the women (50.6%) who reported gynaecological morbidity, 24.4% reported the presence of one gynaecological morbidity, 13.5% the presence of two gynaecological morbidities and 8%, 4.1%, 0.5% (3) and 0.2% (1) the presence of three, four, five and six gynaecological morbidities respectively.

TABLE 3.20: FREQUENCY OF TYPES OF GYNAECOLOGICAL MORBIDITY BY AGE GROUP

Type of gynaecological morbidity * N=334	16 - 25 years	26 - 35 years	36 - 45 years
Overall morbidity	116 (34.7)	175 (52.4)	43 (12.9)
Menstrual problem	62 (18.6)	91 (27.2)	21 (6.3)
Reproductive tract infection	78 (23.3)	114 (34.1)	26 (7.8)
Prolapse	21 (6.3)	47 (14.1)	12 (3.6)
Infertility	20 (6.0)	14 (4.2)	1 (0.3)
Dyspareunia	5 (1.5)	11 (3.3)	1 (0.3)
Urinary infection	25 (7.5)	51 (15.3)	16 (4.8)
Abortion morbidity	5 (1.5)	4 (1.2)	-
IUD morbidity	2 (0.6)	-	-

* Multiple responses

Table 3.20 gives a breakup of the different gynaecological morbidities by age of the women. The table shows that women in the 26-35 age group report the highest and those in the 36-45 years age group the lowest number of morbidities. Most of the women reported one or more morbidity symptoms (table 3.19). Though some women gave names of the illnesses they suffered from (eg. prolapse), most of them named the symptoms currently faced by them, such as 'safed pani' (white discharge), 'lal pani' (red discharge), 'autipotat dukhne' (pains in lower stomach).

The women had various explanations for their morbidity symptoms ranging from the supernatural to the medical. The explanations ranged from the pragmatic to the philosophic as seen in the words of two key informants

"illness increases due to different doubts".

"it (white discharge) does not happen on its own

there must be some prior illness, the body is not fit".

Table 3.21 summarises the emic perspective of each of the gynaecological morbidities reported by the key informants. The next section presents the women's perspective on each of the gynaecological morbidities.

3.3.3.1 Menstrual problems

26.4% of the women (table 3.19) reported the presence of menstrual problems, the second most frequently reported gynaecological morbidity. Menstrual problems reported by the women included symptoms such as spotting, irregular menstruation, ammenorhoea, severe pain during menstruation, excessive and extended menstruation. Many women complained of changes in their menstrual cycle including spotting and irregular menses after 'operation'. They felt this was normal and so had not sought treatment. Several symptoms such as crippling pain during menses and excessive and extended (upto 10 days and more) menstruation were attributed to cultural beliefs such as 'it's a women's lot' and 'its the way I am' or as a natural consequence of the 'operation'. Women also reported that the severe pain during menstruation was a result of certain activities such as sitting for extended periods on the floor or a consequence of lifting heavy things. Some women refused to think of the causal factors (denial as a coping mechanism) as they were too frightening. In the words of one woman

"I don't know. I never think of that. Blood is not pure (her symptom-the type of blood that is discharged. Menstrual blood is black. Sometimes when its twice a month then pure blood goes".

TABLE 3.21 : SUMMARY OF KEY INFORMANTS PERSPECTIVE OF GYNAECOLOGICAL MORBIDITY

MORBIDITY CONDITION/ NAME OF DISEASE N=36	PERCEIVED CAUSE/BELIEF OF SYMPTOM/PROBLEM	EFFECT ON WOMAN	MOST TROUBLING/FEARED ASPECT OF SYMPTOM (QUOTES)
MENSTRUAL PROBLEMS	-since operation -due to weakness -due to heavy work/too much work -due to lifting heavy things -sitting too long on the floor	-cannot work for 2 to 3 days due to severe pain -cannot walk or go out for few days due to pain -feel lifeless and as if no energy in body -get costipated and lose appetite due to pain -lose interest in everything, only lie in bed	''I fear that I must have some illness'' ''I cannot sleep due to various thoughts'' ''I do not think it will be cured'' ''I may get cancer'' ''death would be better than this''
REPRODUCTIVE TRACT INFECTIONS white discharge red discharge lower abdominal pain	-started after operation -happens to everybody -cant say as have not told anybody -not good, a woman might die -maybe because of weakness -because of bearing many children -due to sleeping with husband (intercourse) -due to hot things -due to injection given at the time of operation -might cause miscarriage -due to weakness -I dont know, I never think of that -due to abortion at a young age (when single) -since operation -due to heavy work load -due to lifting heavy things -after cleaning 'pishvi' (abortion) -due to injection given during sterilisation -due to a mistake during operation -due to heavy work load -due to lifting heavy things -as husband visits other women -'god's pain'- mother had it, now passed on to her -pains on lifting things	-can lead to cancer -irritates place of urination -increases weakness -hands and legs have become lifeless, head and eyes hurt -cant walk far -feel giddy if I lift heavy things -cannot fetch water -constant anxiety -bad odour, everybody complains -feel wet and cold -feel ashamed -feel like sleeping -'cannot pay attention to work' -cannot work quickly any more -waist pains -constant discharge is disturbing -cannot do even the house work now -severe weakness -never lift heavy things -no appetite, feel weak -cannot walk due to severe itching, also diffi culty in sitting with people (due to bad odour)	''sense of shame, due to constant discharge and smell'' ''feel dirty'' ''I dont go out as might have discharge'' ''I cant get up in the morning without a massage'' ''I might get bed-ridden'' ''fear-what will happen to me ?'' ''how will it get cured - so many tensions'' ''I will not live to see my children's marriages'' ''cannot work like earlier, I feel like sitting quietly and do not want to go anywhere. When I go out my head aches in the sun. I get irritated when there is noise''. ''I fear nothing. If I die, so be it. If I cannot work of what use am I ?'' ''I have a doubt that there is some disease in my stomach'' ''if there is more discharge, woman does not survi ve'' ''I dont think I have an illness-women always have discharge'' ''feel sad, what is the use of my being here'' ''it is bad, may get cancer'' ''relatives say its god's curse''
PROLAPSE	-due to big child -journey in bullock cart before delivery -due to lifting of heavy vessel -due to frequent intercourse -due to inadequate diet -too many closely spaced pregnancies -	-on lifting heavy things (uterus) comes down -difficulty in passing stool -difficulty during intercourse -cannot sit on the floor -(uterus) comes out on coughing -cannot wash clothes or do other chores which require sitting down -need a stool or cushion to sit	''if I go anywhere I cannot sit on the floor. When I ask for a cushion, people must wonder about the reason -even if they do not say anything'' ''I need surgery/operation for the problem''
INFERTILITY	-do not know - god's will -due to weakness -as the body is not 'fit' -due to fibroid	-lost interest in everything -do not socialise any more	''will I ever have a child with all these prob- lems ? I have had one miscarriage already''. ''lost interest in things, dont go out anymore''

TABLE 3.21 continued

MORBIDITY CONDITION/ NAME OF DISEASE N=36	PERCEIVED CAUSE/BELIEF OF SYMPTOM/PROBLEM	EFFECT ON WOMAN	MOST TROUBLING/FEARED ASPECT OF SYMPTOM (QUOTES)
DYSPAREUNIA	-since last delivery -due to frequent intercourse (especially during pregnancy) -because of weakness -since operation -due to lack of rest after child birth	-feel weak, cannot work as before -feel giddy on walking -severe pain during intercourse	''constant fear -why does it pain ?'' ''how will this get cured ? it will not be cured till i die.what shall i do for that - even if i want to i cannot leave my husband. i dont think there's any use in taking treatment - one is i feel shy and also money will be required for treatment ''
URINARY INFECTION	-because of weakness -because of frequent intercourse -due to husband's medication -due to sitting in the sun -because of eating hot food after being out in the sun	-burning sensation and irritation at place of urination -difficulty in urination -frequent urination	''need to take treatment- but need money for that''
ABORTION MORBIDITY	-due to injection given during operation -discharge started after operation -due to still birth	-severe pain near abdomen -feel i have temperature very often -cannot bend to perform chores such as sweeping the floor	''limbs feel lifeless'' ''have to take tablets often to bear the pain and complete chores'' ''what will happen ? fear i will die''
IUD MORBIDITY	-due to use of IUD	-	-

TABLE 3.21 continued

MORBIDITY CONDITION/NAME OF DISEASE	ACTION TAKEN TO LESSEN SYMPTOMS	SUGGESTED TREATMENT
MENSTRUAL PROBLEMS	-foment the stomach with a hot brick/warm cloth/hot water -massage the stomach with oil -drink herbal tea -lie down flat to alleviate the pain -'toona' (sorcery- a spell to remove the evil eye) -nothing, just bear it-scared of injection -if very severe, go to doctor	-treatment required, from a medical doctor as he/she can help -treatment required, from a chemist or 'small' (less qualified) doctor -treatment required, from homeopath as its more effective -treatment required, from a doctor -but no money -treatment required, from a 'big' (highly qualified) doctor to get better -treatment required, from allopath- could be 'small' (not highly trained) or 'big' (highly trained) -treatment required, from doctor at local voluntary organisation -treatment not required (from a doctor), as this problem is not important enough -treatment not required, as the problem is due to weakness
REPRODUCTIVE TRACT INFECTIONS	-remain clear by taking regular bath/washing often -avoid hot food like ghee (fat), eggs, meat and fish and pungent (spicy) food -take bath with hot water -do an oil massage -fomentation with a hot brick -take a bath -drink herbal tea -take herbal medicine -take tablets to alleviate the pain -go to doctor (allopath) -nothing	-treatment required, as only medical doctor (allopathic) can help -treatment required as problem will not go away without it/must take medicine to get better -treatment required, allopathic and ayurvedic too -treatment required- allopathic, as has no knowledge of home/herbal remedies -treatment required, from a chemist as its cheaper -treatment required, from local ESIS* hospital as husband has card (membership) for it -treatment required -allopathic and ayurvedic, but not told anyone yet -treatment required, but has taken treatment many times without any result (not cured) -treatment required-allopathic or homeopathic, but doctors did not give any information about the problem when sought treatment -treatment required, but afraid to go for it as the doctor might do an internal examination -treatment required -but it would be easier to tell a lady doctor -treatment not required as women always have discharge -home remedies only required like coriander seeds boiled in water
PROLAPSE	-do surgery to correct it	-treatment required, as it is the only solution to the problem -treatment required-allopathic, as only solution to the problem -treatment required, at ESIS hospital as the family has card for it
INFERTILITY	-avoid 'hot' foods like ghee, eggs, meat, papaya (to avoid mis carriage)	-treatment required - herbal or from chemist -treatment required, from a private practitioner or 'big' doctor or herbal specialist, but not from municipal hospital -treatment required- allopathic and supernatural too as only allopathy has not helped
DYSPAREUNIA	-apply balm on the waist before sleeping -massage the stomach	-treatment required-from doctor (allopathic) as only he can cure it -treatment required, but has not told anybody as feel shy -treatment not required -neither allopathic or home remedies -treatment required - but from lady doctor (not available in municipal dispensaries)
URINARY INFECTION	-fomentation with hot water -eat fresh leafy vegetables, drink coconut water (for its cooling property) -drink sugar water and plain water-	-no treatment required- home remedies like ginger powder and sugar are effective/adequate -no treatment required- home remedies like sugar water are adequate
ABORTION MORBIDITY	-eat nutritious food -avoid 'hot' foods like papaya	-treatment required from lady doctor
IUD MORBIDITY	-	-

Women who had amenorrhoea reported that it was a result of weakness - which in turn was a result of their socio-economic and cultural status (burden of work and closely spaced pregnancies). As the following case demonstrates the women clearly recognise that food is not a causal factor in discharge (as is commonly understood amongst health professionals)

Case 2:

She was a 30 year old Hindu woman from North India, residing in the zhopadpatti for 12 years, with no formal schooling, not working for wages, reporting white discharge and ammenorhoea

"some ladies say when there's white discharge, hands and legs become loose. Don't know why. Ladies say because of weakness. Maybe because of intercourse (frequent). Nothing because of hot or cold food. How will it happen by eating something cold. Because of hot food it burns in stomach, heat increases but not white discharge. Troubles in urine. If it (white discharge) goes more there is some illness of stomach. There will be weakness. I don't know about major illness. When it goes more some clean the 'pishvi' (uterus)."

3.3.3.2 Reproductive tract infections

The highest number of women reported the presence of reproductive tract infections (upper and lower - 33%). The symptoms included severe/profuse vaginal discharge (white or red discharge) accompanied by itching, irritation and/or bad odour and lower abdominal pain.

In case of **white discharge** many women felt that this was a'woman's' problem (''happens to everybody'') and it was inevitable that she would have it at some stage in her life. Interestingly the women attributed the problem to 'frequent sex with the husband'. Some felt that it was a result of weakness, result of bearing too many children, while still others felt that it was the cause of weakness. As reported in other studies too (Gittelsohn *et al.*, 1994; Kannani, Latha and Shah, 1994) women felt that heavy work, lifting heavy things and a hard life (and consequent weakness) led to white discharge. Some women attributed it to stress (''too many tensions'') as debated in various recent studies (Gittelsohn *et al.*, 1994). Many women felt that the discharge had started or become heavier after tubectomy as ''ladies or other women say that after 'operation' no energy is left in the woman'' or ''many ladies say white goes after operation'' ('operation' is the popular term used by the women for sterilisation /tubectomy). Some women felt that the discharge was a consequence of 'heat in the body' resulting from too many tablets prescribed for the discharge or for some other ailment. A few women felt that the discharge was a result of sorcery practised by other women on her. The belief is that another women who is ill and has discharge passes it on to you through 'utara' (black magic).

Lower abdominal pain (included abortion morbidity, IUD morbidity and reproductive tract infections) Most of the women referred to this as pain in the 'autipot'- lower stomach and sometimes pain in the waist if the pain was mainly on one side of the abdomen. This pain was perceived as severe as it was different from the stomach pain/cramps experienced during menstruation. The main cause was perceived to be

'due to lifting of heavy things' such as water pots. A heavy workload, walking a great distance were also perceived to be contributing factors. Many women also said that frequent intercourse was a causal factor, while others said that the injection given in the spinal cord before 'operation' (sterilisation) had started the problem. The 'operation' and early return to household chores, especially lifting heavy things was attributed as the main causal factor for lower abdominal pain. A few women said that this was 'God's pain' attributing it to supernatural sources. Many of the women were given a D&C (dilation and curretage) before being sterilised as they had ended unwanted pregnancies and opted for sterilisation at the same time. These women felt that the 'cleaning' (popular term for medical termination of pregnancy or D&C) was performed inadequately. Some women felt that the problem was a result of 'their husband's having outside tastes' (going to sexual workers). They said that this was hinted to them by health providers (allopathic) when they sought treatment at the local municipal dispensary. Thus women attributed reproductive tract infections to the social ('keep husband's will) economic (physical burden of work and lack of money) realities of their lives.

3.3.3.3 Urinary problem

This was the third most frequent problem reported by 13.9% of the women. The symptoms reported to indicate urinary infection were irritation and itching at the vagina, presence of fistula at vagina and burning on urination. Some women felt that it was caused because of eating hot foods (egg, meat, fish) and due to exposure to the

sun. Others reported that it was due to 'heat' produced due to medication taken by them or their husbands for other ailments. Women also felt that lack of sleep (and consequent weakness) and frequent intercourse were also causal factors. 'Fever inside' was also given as one cause.

3.3.3.4 Prolapse

Prolapse or 'ang baher yene' (organ comes out) was reported by 12.1% of the women. Many women also referred to it as 'something heavy down below'.

The most common cause attributed for prolapse was

"not enough rest after delivery".

Some felt that it was

"because of sleeping (having intercourse) too often",

or "having intercourse too soon after a delivery "

"lifting heavy things"

was another reason reported by many women.

Some women felt that it was a result of inadequate diet after deliveries or because of other inadequate facilities during home deliveries. As one woman replied, on probing for the cause of her symptoms

Case 3:

She is a 30 year old Hindu Maharashtrian woman educated up to class 5 with two young children. She has lived in the zhopadpatti for 10 years and does not work for wages.

"I don't know why it happens, when I lift heavy vessel and while putting it down there must be pressure on the stomach, therefore it must be paining. The second reason I feel is everyday intercourse. Now (as am older) I don't have energy that's why it happens. He wants more (intercourse) and I don't. But I have to keep his will".

3.3.3.5 Infertility

5.3% of the women in the sample reported primary or secondary infertility. Women in the 16-25 years age group reported this problem (table 3.20). Most of the women reported infertility as abortion morbidity which is at section 3.3.7

3.3.3.6 Dyspareunia

Only 2.6% of the women reported 'pain during intercourse'. The main causal factor attributed to this was 'operation'. The women felt that they had not had adequate rest after the operation and performing heavy tasks had led to this problem. Some women attributed it to child birth/abortion complications, while still others felt it had developed due to early intercourse after childbirth.

The following case demonstrates the women's beliefs

Case 4:

She is a 29 year old Buddhist Maharashtrian woman with 3 young children, with no formal schooling, residing for 12 years in the zhopadpatti and working as a domestic worker

"How can I say that (why the pain during intercourse). Maybe because I cleaned it (uterus). Has any equipment been left inside while cleaning the pishvi ? I feel so. It was never earlier. I told my husband. He said it may happen because of miscarriage".

3.3.3.7 Abortion, Sterilisation and IUD morbidity

Most of the couples (95.6%) did not currently use any temporary method of contraception. However almost half the couples (48.9%) had adopted the permanent method, that is they were sterilised. Of those sterilised (48.9%), most - 47.6% had undergone tubectomies. Of the 47.6% women who were sterilised, 17.3% had been sterilised more than 6 years ago, 18.2% between 3-6 years ago, 12.3% between 3 months and up to 3 years. Only 0.9% of the women in the survey sample were sterilised within the 3 months prior to the survey. As morbidity recall for the study was 3 months, abortion morbidity could be explored with very few women (0.9%) in the sample. Further as most of the women did not use contraceptives, Intra Uterine Device (IUD) related morbidity was also predictably low (0.3%).

3.3.4 Management of gynaecological morbidity/symptoms by women

A wide variety of precautions were reported by the women to lessen their reported symptoms. Almost all the women reported that if the symptom was severe then they sought medical treatment. But at the initial stage certain precautions were taken by them at home to lessen the pain or seek relief. The precautions were universally related to restrictions on hot foods (eggs, meat, fish) if there was white or red discharge, drinking plenty of water and sugar water and coconut water if there was burning on urination. They also avoided hot pungent and oily food. All kinds of pain - abdominal, stomach, waist and body pain were treated by either hot fomentation on the concerned area, or massaging it with warm oil or by rubbing balm on it. Some women reported drinking herbal teas and others traditional concoctions for white discharge. Some women reported taking a bath to feel better and others keeping themselves clean to avoid disease. In case of severe pain the women self medicated themselves on tablets purchased from the local chemist.

Though most of the women had migrated to the city only in the last 10 years, almost all expressed faith in the health providers to cure their symptoms. Almost all the women reported seeking treatment at the local health post or hospital. However, though most said that they required surgical intervention (for prolapse) or further tests such as X-rays, sonography and blood tests to treat their symptoms (for menstrual problems, abdominal pain, urinary infection, dyspareunia) the majority were not satisfied with the services provided by the local health post. Many complained that

they had not been examined from inside (uterus) as they had been too shy to tell the male doctor of their symptom or because of the attitude of the health providers. Alternatively, those who had taken treatment from local private practitioners did not feel satisfied with the treatment as the symptoms kept recurring. Further the treatment was too expensive to continue due to frequent (re)occurrence. It was interesting to note that women whose husbands had regular jobs and a hospital card (ESIS) were most regular in treatment as they had better access to health care. The pattern followed by most women in treating their symptoms is as shown in figure 3.6.

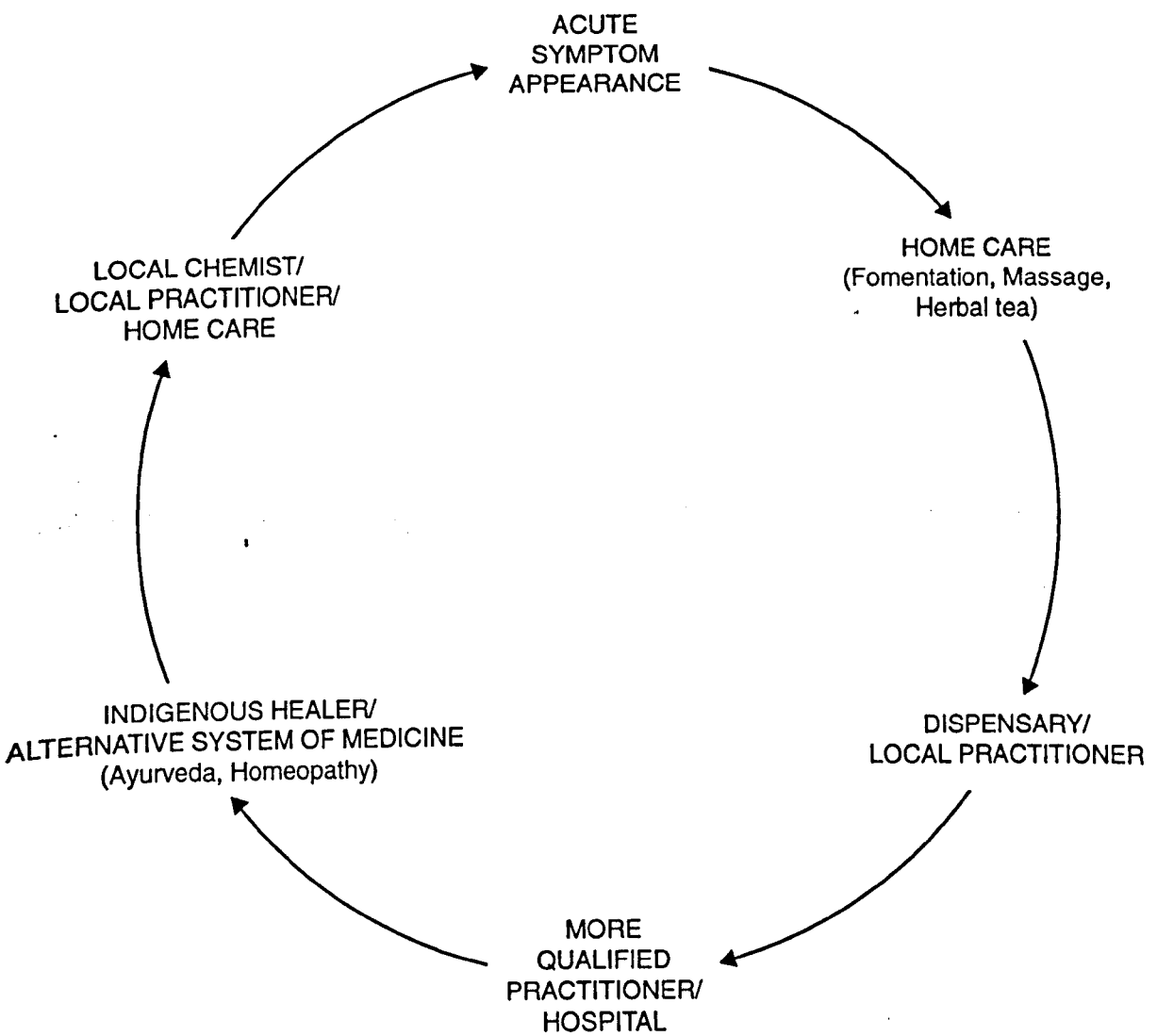
The only women who had sought regular medical treatment starting from the local dispensary, local private practitioner, municipal hospital and private nursing homes were the women who had infertility. This was undoubtedly because of the support provided by the spouse and sometimes older women in the community and family. Most women reported loss of faith in the medical profession due to expensive fees and medication and wrong/partial diagnosis and no long term relief/cure of symptoms.

3.3.5 Summary of main results

- Half the women reported the presence of gynaecological morbidity, of which reproductive tract infections, menstrual problems, prolapse and urinary infections formed the major proportion. Though these morbidities are perceived by the medical profession as 'serious' (section 1.3.1) as they lead to further infections and could prove to be fatal in time if left untreated, the women's perception is that they are

Figure 3.6

Pattern of Treatment for Gynaecological Morbidity



'normal' in women or only a result of 'heavy work' or a natural consequence of the 'operation'. This could have serious consequences as the women's perceptions lead them to shroud the real causal factors and therefore not seek treatment 'in right earnest'

- Women in the age group of 26-35 years mainly reported RTIs (34.1%), menstrual problems (27.2%), urinary infections (15.3%) and prolapse of uterus (14.1%). The next largest number of cases were reported in the 16-25 years age group, while the least number of cases were reported by women in the 36-45 years age group. Thus women in the sexually active group (16-35 years) accounted for 87.1% of the reported gynaecological morbidity
- Women resorted to home remedies such as avoidance of hot oily or pungent foods or drinking certain mixtures perceived to have a cooling effect, in the initial phase of gynaecological morbidity. Women did seek treatment for their morbidity when it interfered in their daily lives but discontinued regular treatment as either they could not afford the it because of disillusionment with the health system (both private and public) as they were given only symptomatic treatment and their symptoms kept reappearing.

3.4 ASSOCIATION OF SOCIAL SUPPORT AND SOCIAL NETWORKS WITH MORBIDITY

Against the background of high prevalence of gynaecological morbidity in the respondents and their socio-cultural explanations for its occurrence and management in the last section, in this section the association of gynaecological morbidity with

psychiatric morbidity is explored. Qualitative data clarifies the nature of this association by discussing the effect of the morbidity on the women. Lastly to understand the factors which make women vulnerable or resistant to these morbidities, their association with socio-demographic variables and social support and social networks is discussed.

3.4.1 Psychiatric morbidity

As discussed in section 2.3.4, the cut-off point for this study was calculated by reviewing International and Indian literature on the use of the SRQ-20 (tables 2.3 and 2.4), and calculating the specificity and sensitivity of the various cut-off points with the dot matrix and the ROC analysis (tables 2.5 & 2.6). The sensitivity and specificity for the cut-off points 7/8 and 8/9 was very similar. Though the ROC analysis indicated a higher specificity (94%) for 8/9 as compared to 7/8 (88%), the sensitivity was the same (67%) for both cut-off points. However consultation with Dr Glyn Lewis, an expert on calculation of sensitivity and sensitivity using the ROC analysis at the London School of Hygiene and Tropical Medicine indicated that either of the two cut-off points (7/8 or 8/9) could be taken for purposes of analysis. As the difference in specificity between the two cut-off points was not high and though ROC analysis favoured 8/9 as the cut-off point, literature review favoured 7/8 as the cut-off point, it was decided for purposes of analysis, to use 7/8 as the cut-off point for this study. However, during analysis the results of the cut-off point 8/9 would also be discussed for purposes of comparison.

On using 7/8 as the cut-off point, for the current study **17.9%** women reported minor psychiatric morbidities. Table 3.22 shows the distribution of symptoms when 7/8 is taken as the cut-off score for caseness and non-casesness.

42.6% of the women report feeling tired all the time, followed by 37.9% each who report feeling nervous, tense and worried and easily tired. 13.2% of the women reported minor psychiatric morbidities when 8/9 is taken as the cut-off point.

TABLE 3.22: FREQUENCY OF MINOR PSYCHIATRIC MORBIDITIES

Symptom on SRQ 20	Frequency of 'YES' responses (%) N = 660
Headache often	175 (26.5)
Poor appetite	130 (19.7)
Sleep badly	65 (9.8)
Easily frightened	174 (26.4)
Hands shake	91 (13.8)
Feel nervous, tense, worried	250 (37.9)
Poor digestion *	42 (6.4)
Trouble thinking clearly	55 (8.3)
Feel unhappy	212 (32.1)
Crying more than usual	167 (25.3)
Difficult to enjoy daily activities *	37 (5.6)
Difficult to make decision	65 (9.8)
Daily work suffering	69 (10.5)
Unable to play useful role	47 (7.1)
Lost interest in things	65 (9.8)
Feel a worthless person *	77 (11.7)
Thought of ending life in mind *	41 (6.2)
Feel tired all the time	281 (42.6)
Have uncomfortable feelings in stomach	127 (19.2)
Easily tired	250 (37.9)

* Missing data = 1 case

3.4.2 Association between gynaecological and psychiatric morbidity

As discussed in section 3.3.1, 50.6% of the respondents reported gynaecological morbidity (i.e. presence of at least one gynaecological morbidity). Table 3.23 shows that 27.5% of these women also reported psychiatric morbidity. This indicates a very high association between gynaecological and psychiatric morbidity as only 17.9% of the respondents (with and without gynaecological morbidity) had reported psychiatric morbidity in the survey sample. For the cut-off point 8/9, the association between gynaecological and psychiatric morbidity (table 3.23) is seen to be 21.3% .
Thus the association between gynaecological morbidity and women's mental health is quite significant.

3.4.3 Effect of gynaecological morbidity on women

Qualitative data provided details of the impact/effect of gynaecological morbidity on the women. The women reported that the gynaecological symptoms had effected their lives in different ways. The effect was felt in three ways: physical, social and psychological.

Physical

Women said that they could not perform household chores at the same pace as they had earlier. They took much longer to cook, clean, wash clothes and fill water from the community taps. Many said that they found it difficult to wake up in the morning

TABLE 3.23: GYNAECOLOGICAL MORBIDITY BY PSYCHIATRIC MORBIDITY

Presence of gynaecological morbidity N=660	Presence of psychiatric morbidity (7/8) Morbidity absent (non-case) N=660 (%)	Morbidity present (case)	Total	p value	Presence of psychiatric morbidity (8/9) Morbidity absent (non-case) N=660 (%)	Morbidity present (case)	Total	p value
Morbidity absent (non-case)	300 (92.0)	26 (8.0)	326(100)	chi square= 43.03	310(95.1)	16(4.9)	326(100)	chi square= 38.53
Morbidity present (case)	242 (72.5)	92 (27.5)	334(100)	p= 0.000	263(78.7)	71(21.3)	334(100)	p= 0.000
Total	542 (100)	118 (100)	660(100)		573(100)	87(100)	660(100)	

and were stiff for an hour or so. Most reported being unable to sit on the ground for long and to also lift heavy things. Many of the women said that they could not walk long distances any more. Their limbs felt lifeless and hands and legs got cramped easily. Most women said they have a general feeling of weakness.

Social

The women restricted their social activities such as visiting relatives, friends or going out for entertainment as they tired more easily, or could not walk for long distances, or because they felt dirty (discharge). They also did not want to give an opportunity to relatives and other people to comment on their 'laziness' when they could not help in performing household chores at family functions.

Psychological

The women reported a poor image of self as compared to earlier due to poorer performance in household tasks and inability to perform other tasks (take child to school, or work for wages). Women with white and red discharge reported that they wondered what other women/people thought of them, as they themselves felt 'wet and dirty'. Women who had itching and bad odour with discharge were also afraid to sit or stand close to other people for fear of giving off a bad odour or scratching themselves to alleviate the itching. Women were reluctant to have intercourse due to the same reasons. Women reported feeling 'low' as they could not perform their share of the household tasks (due to physical implications -elaborated above) but had to spend money on their treatment (even if spasmodic). They felt that this money could

be better spent on the children.

Future implications of symptoms

Though most of the women 'made light of' or showed disinterest in their reported symptoms, on probing it was learnt that they had hidden fears and beliefs about them. Many women feared that white discharge and red discharge would lead to cancer. Some women who had itching and a bad odour along with discharge feared that they had STDs (sexually transmitted diseases). The following are fears expressed by a 19 year old woman from North India, educated up to class 5, married for two years and as yet childless; a 30 year old woman with 2 children and no formal schooling from Maharashtra; a 23 year old woman with class 8 education from Bihar and a 34 year old Buddhist woman educated up to class 7 from Maharashtra

"Even I think there must be some illness (hesitated)...yes ..yes I feel like that (that its 'heat'- the term for STD) but there are no boils. I think now its less but some day or the other it will happen".

"Who will look after my children if something (cancer) happens to me ?"

"If it was more I would have fear...long silence..but it's not".

"If something more happens who will look after me ? My children are young ".

The fears for all the symptoms were similar. Some women felt that the symptoms would grow/increase over time and they would eventually die. Most feared contacting cancer or some big (fatal) disease, and eventual disability and death. Most women felt that the symptoms were a sign of some disease.

"I fear that some illness must have happened to me".

On the other hand many women coped by accepting the morbidities (denial) as their lot in life.

"I don't think I have an illness. Women always have white discharge".

"No fear. I don't think".

3.4.4 Association between morbidity and socio-demographic characteristics of respondents

Age

A significant association is seen between age of the respondents and psychiatric morbidity. Table 3.24 shows that with increase in age there is a proportional increase in the number of women reporting 'caseness' for psychiatric morbidity. Interestingly, though for gynaecological morbidity the least number of cases were reported by women in the 36-45 years age group, in the case of psychiatric morbidity the largest number of cases were reported by women in the older age group. This indicates that though for gynaecological morbidity younger women in the sexually active age group are vulnerable to morbidity, for psychiatric morbidity older women are more vulnerable.

Table 3.24 summarises the association between socio-demographic variables and the two morbidity.

TABLE 3.24: SOCIO-DEMOGRAPHIC CHARACTERISTICS BY MORBIDITY

SOCIO-DEMOGRAPHIC VARIABLE	FREQUENCY OF GYNAECOLOGICAL MORBIDITY			p VALUE	FREQUENCY OF PSYCHIATRIC MORBIDITY			p VALUE
	CASES	NON-CASES	TOTAL		CASES	NON-CASES	TOTAL	
AGE IN YEARS				Chi Square= 0.77				Chi Square= 7.63
16-25	116(49.8)	117(50.2)	233	p= 0.68	29(12.4)	204(87.6)	233	p= 0.02
26-35	175(52.0)	161(48.0)	336		68(20.2)	268(79.8)	336	
36-45	43(47.2)	48(52.8)	91		21(23.1)	70(76.9)	91	
EMPLOYMENT				Chi Square= 0.00				Chi Square= 12.05
NOT EMPLOYED	263(50.6)	257(49.4)	520	P= 0.97	79(15.2)	441(84.8)	520	p= 0.000
EMPLOYED	71(50.7)	69(49.3)	140		39(27.9)	101(72.1)	140	
RELIGION				Chi Square= 0.81				Chi Square= 4.44
HINDU	255(50.1)	254(49.9)	509	p=0.93	85(16.7)	424(83.3)	509	P = 0.03
MUSLIM	6(42.9)	8(57.1)	14		1(7.1)	13(92.9)	14	
CHRISTIAN	12(54.5)	10(45.5)	22		2(9.1)	20(90.9)	22	
BAUDH	55(52.9)	49(47.1)	104		26(25.0)	78(75.0)	104	
OTHERS	6(54.5)	5(45.5)	11		4(36.4)	7(63.6)	11	

Table 3.24 continued

SOCIO-DEMOGRAPHIC VARIABLE	FREQUENCY OF GYNAECOLOGICAL MORBIDITY CASES	NON-CASES	TOTAL	p VALUE	FREQUENCY OF PSYCHIATRIC MORBIDITY CASES	NON-CASES	TOTAL	p VALUE
STERILISATION				Chi Square=0.16				Chi Square= 2.17
NOT STERILISED	168(49.8)	169(50.2)	337	p=0.69	53(15.7)	284(84.3)	337	p=0.14
STERILISED	166(51.3)	157(48.7)	323		65(20.1)	258(79.9)	323	
MAJOR ILLNESS				Chi Square=7.24				Chi Square= 35.78
ILLNESS ABSENT	311(49.4)	318(50.6)	629	p=0.007	100(15.9)	529(84.1)	629	p=0.000
ILLNESS PRESENT	23(74.2)	8(25.8)	31		18(58.1)	13(41.9)	31	
FAMILY INCOME (IN RUPEES)				Chi Square= 0.12				Chi Square= 3.08
< 1000 pcm	97(52.1)	89(47.8)	186	p=0.72	45(24.2)	141(75.8)	186	p=0.07
1000-3000 pcm	222(50.1)	221(49.9)	443		65(14.7)	378(85.3)	443	
3000 and above pcm	12(52.2)	11(47.8)	23		7(30.4)	16(69.6)	23	
RESPONDENT'S EDUCATIONAL STATUS				Chi Square= 0.96				Chi Square= 0.07
NO FORMAL SCHOOLING	152(47.8)	166(52.2)	318	p=0.32	60(18.9)	258(81.1)	318	p=0.78
BELOW MATRIC	162(54.0)	138(46.0)	300		49(16.3)	251(83.7)	300	
MATRIC & ABOVE	20(47.6)	22(52.4)	42		9(21.4)	33(78.6)	42	
HUSBAND'S EDUCATIONAL STATUS				Chi Square= 0.86				Chi Square= 3.17
NO FORMAL SCHOOLING	64(50.0)	64(50.0)	128	p=0.35	31(24.2)	97(75.8)	128	p=0.07
BELOW MATRIC	171(49.9)	172(51.1)	343		59(17.2)	284(82.8)	343	
MATRIC & ABOVE	96(52.2)	88(47.8)	184		27(14.7)	157(85.3)	184	

Education, Family income and Sterilisation

On exploring the association between morbidity and respondents' and respondent's husband's education, no significant association is seen between gynaecological or psychiatric morbidity and education. There was also no significant association between family income and sterilisation and the two morbidities.

Religion

A significant association was seen between respondent's religion and psychiatric morbidity. Women who were non-Hindus (especially Baudhs- minority group from the home state) reported higher 'caseness' for psychiatric morbidity.

Employment

However, in case of respondent's employment, though there is no significant association between gynaecological morbidity and respondent's employment, there is a significant association between respondent's employment and psychiatric morbidity. Table 3.24 shows that women who are not employed for wages are less vulnerable to psychiatric morbidity.

Major illness

A significant association is also seen between gynaecological and psychiatric morbidity and presence of major illness as reported by the respondents. Table 3.24 shows that though the numbers are small, the proportion of women reporting caseness for both gynaecological and psychiatric morbidity is higher for those women reporting a major

illness.

3.4.5 Association between morbidity and social support

On exploring the relationship between levels of confiding, practical and negative aspects of support from closest and second close person, with morbidity (that is caseness in gynaecological and/or psychiatric morbidity) it was seen (tables 3.25 and 3.26) that there was no significant association between types and levels of support and morbidity (gynaecological and psychiatric morbidity) for closest person and second close person. This indicates that the levels (low or high) of confiding, practical and negative support are not associated with caseness for either gynaecological or psychiatric morbidity.

However if the definition of gynaecological morbidity is revised (cross refer to table 2.9) then there is a significant association between levels of confiding support and gynaecological morbidity, indicating that higher levels of confiding support from second close person are likely to influence higher reporting of two or more gynaecological morbidities in the women (table 3.28). However there was no significant association between support from closest person and presence of two or more gynaecological morbidity (table 3.27).

TABLE 3.25: TYPES OF SUPPORT FROM CLOSEST PERSON BY MORBIDITY

Types of support	Frequency of gynaecological morbidity (%)			p value	Frequency of psychiatric morbidity (%)			p value
	Cases	Non-cases	Total		Cases	Non-cases	Total	
Confiding support				chi square= 0.00				chi square= 2.02
Low	24(51.1)	23(49.0)	47	p=0.94	12(25.5)	35(74.5)	47	p=0.45
High	310(50.6)	303(49.4)	613		106(17.3)	507(82.7)	613	
Practical support				chi square= 0.46				chi square= 0.57
Low	77(53.1)	68(46.9)	145	p=0.49	29(20.0)	116(80.0)	145	p=0.45
High	257(49.9)	258(50.1)	515		89(17.3)	426(82.7)	515	
Negative support				chi square= 1.04				chi square= 0.38
Low	117(53.4)	102(46.6)	219	p=0.30	42(19.2)	177(80.8)	219	p=0.53
High	217(49.2)	224(50.8)	441		76(17.2)	365(82.8)	441	

TABLE 3.26: TYPES OF SUPPORT FROM SECOND CLOSE PERSON BY MORBIDITY

Types of support	Frequency of gynaecological morbidity			p value	Frequency of psychiatric morbidity (%)			p value
	Cases	Non-cases	Total		Cases	Non-cases	Total	
Confiding support				chi square= 0.27				chi square= 0.72
Low	56(49.1)	58(50.9)	114	p=0.60	25(21.9)	89(78.1)	114	p=0.39
High	206(51.9)	191(48.1)	397		73(18.4)	324(81.6)	397	
Practical support				chi square= 0.60				chi square= 0.14
Low	113(53.3)	99(46.7)	212	p=0.43	39(18.4)	173(81.6)	212	p=0.70
High	149(49.8)	150(50.2)	299		59(19.7)	240(80.3)	299	
Negative support				chi square= 0.86				chi square= 3.27
Low	160(53.0)	142(47.0)	302	p=0.35	50(16.6)	252(83.4)	302	p=0.07
High	102(48.8)	107(51.2)	209		48(23.0)	161(77.0)	209	

TABLE 3.27: TYPES OF SUPPORT FROM CLOSEST PERSON BY REVISED GYNAECOLOGICAL AND PSYCHIATRIC MORBIDITY

Types of support	Frequency of gynaecological morbidity (%)			p value	Frequency of psychiatric morbidity (%)			p value
	Cases	Non-cases	Total		Cases	Non-cases	Total	
Confiding support				chi square= 0.05				chi square= 2.90
Low	13(27.7)	34(72.3)	47	p=0.81	10(21.3)	37(78.7)	47	p=0.08
High	160(26.1)	453(73.9)	613		77(12.6)	536(87.4)	613	
Practical support				chi square= 0.18				chi square= 1.98
Low	36(24.8)	109(75.2)	145	p=0.66	22(15.2)	123(84.8)	145	p=0.15
High	137(26.6)	378(73.4)	515		55(10.9)	450(89.1)	505	
Negative support				chi square= 0.27				chi square= 0.00
Low	33(24.4)	102(75.6)	135	p=0.60	18(13.3)	117(86.7)	135	p=0.95
High	140(26.7)	385(73.3)	525		69(13.1)	456(86.9)	525	

TABLE 3.28: TYPES OF SUPPORT FROM SECOND CLOSE PERSON BY REVISED GYNAECOLOGICAL AND PSYCHIATRIC MORBIDITY

Types of support	Frequency of gynaecological morbidity (%)			p value	Frequency of psychiatric morbidity (%)			p value
	Cases	Non-cases	Total		Cases	Non-cases	Total	
Confiding support				chi square= 51.85				chi square= 2.13
Low	17(25.8)	49(74.2)	66	p=0.000	13(19.7)	53(80.3)	66	p=0.14
High	316(71.0)	129(29.0)	445		58(13.0)	387(87.0)	445	
Practical support				chi square= 0.77				chi square= 0.14
Low	65(30.7)	147(69.3)	212	p=0.37	28(13.2)	184(86.8)	212	p=0.70
High	81(27.1)	218(72.9)	299		43(14.4)	256(85.6)	299	
Negative support				chi square= 0.90				chi square= 0.77
Low	93(24.8)	282(75.2)	375	p=0.34	28(12.4)	198(87.6)	226	p=0.38
High	80(28.1)	205(71.9)	285		43(15.1)	242(84.9)	285	

On exploring the relationship between morbidity and support from spouse (table 3.29) and non-spouse (table 3.30) a significant association is seen between levels of confiding and practical support and psychiatric morbidity for spouse, indicating that higher levels of confiding and practical support received from spouse influence lower reporting of psychiatric morbidity in women. The relationship remains the same even if the definition of psychiatric morbidity is revised to a cut-off point of 8/9 (table 3.31).

There is no significant association between all three types of support received from non-spouse and psychiatric morbidity, indicating that there is no association between social support from non-spouse and psychiatric morbidity in women. If the revised definition of psychiatric morbidity (cut-off 8/9) is applied to non-spouses (table 3.32) then a highly significant association is seen only between negative aspects of support and psychiatric morbidity, indicating that women who receive high levels of negative support from non-spouse will have psychiatric morbidity. However there is no significant association between the three types of support and gynaecological morbidity for both spouse and non-spouse, indicating that levels of support received from spouse or non-spouse do not influence the presence of gynaecological morbidity in women.

3.4.6 Association between morbidity and social networks

There was no significant association between the number of people available for frank talk and caseness for psychiatric morbidity confounding the common belief that

TABLE 3.29: TYPES OF SUPPORT FROM SPOUSE BY MORBIDITY

Types of support	Frequency of gynaecological morbidity (%)			p value	Frequency of psychiatric morbidity (%)			p value
	Cases	Non-cases	Total		Cases	Non-cases	Total	
Confiding support				chi square= 3.47				chi square= 20.61
Low	27(64.3)	15(35.7)	42	p=0.06	18(42.9)	24(57.1)	42	p=0.000
High	297(49.4)	304(50.6)	601		93(15.5)	508(84.5)	601	
Practical support				chi square= 1.83				chi square= 3.73
Low	59(56.2)	46(43.8)	105	p=0.17	25(23.8)	80(76.2)	105	p=0.05
High	263(49.0)	274(51.0)	537		86(16.0)	451(84.0)	537	
Negative support				chi square= 0.82				chi square= 0.56
Low	83(53.5)	72(46.5)	155	p=0.36	16(20.2)	63(79.8)	79	p=0.45
High	241(49.4)	247(50.6)	488		95(16.8)	469(83.2)	564	

TABLE 3.30: TYPES OF SUPPORT FROM NON-SPOUSE BY MORBIDITY

Types of support	Frequency of gynaecological morbidity (%)			p value	Frequency of psychiatric morbidity (%)			p value
	Cases	Non-cases	Total		Cases	Non-cases	Total	
Confiding support				chi square= 0.43				chi square= 0.60
Low	50(48.5)	53(51.5)	103	p=0.51	22(21.4)	81(78.6)	103	p=0.439
High	206(52.1)	189(47.9)	395		71(18.0)	323(82.0)	394	
Practical support				chi square= 1.18				chi square= 1.56
Low	116(54.2)	98(45.8)	214	p=0.27	35(14.8)	179(75.2)	238	p=0.21
High	140(49.3)	144(50.7)	284		59(20.8)	225(79.2)	284	
Negative support				chi square= 0.54				chi square= 1.58
Low	128(53.1)	113(46.9)	241	p=0.46	40(16.6)	201(83.4)	241	p=0.20
High	128(49.8)	129(50.2)	257		54(21.0)	203(79.0)	257	

TABLE 3.31: TYPES OF SUPPORT FROM SPOUSE BY REVISED GYNAECOLOGICAL AND PSYCHIATRIC MORBIDITY

Types of support	Frequency of gynaecological morbidity (%)			p value	Frequency of psychiatric morbidity (%)			p value
	Cases	Non-cases	Total		Cases	Non-cases	Total	
Confiding support				chi square= 1.76				chi square= 14.05
Low	19(33.3)	38(66.7)	57	p=0.18	17(27.9)	44(72.1)	61	p=0.00
High	148(25.2)	438(74.8)	586		65(11.1)	521(88.9)	586	
Practical support				chi square= 0.05				chi square= 7.39
Low	27(25.2)	80(74.8)	107	p=0.82	22(20.6)	85(79.4)	107	p=0.006
High	141(26.2)	396(73.8)	537		59(11.0)	477(89.0)	536	
Negative support				chi square= 0.16				chi square= 3.34
Low	12(28.6)	30(71.4)	42	p=0.69	15(19.0)	64(81.0)	79	p=0.06
High	155(25.8)	446(74.2)	601		66(11.7)	498(88.3)	564	

TABLE 3.32: TYPES OF SUPPORT FROM NON-SPOUSE BY REVISED GYNAECOLOGICAL AND PSYCHIATRIC MORBIDITY

Types of support	Frequency of gynaecological morbidity (%)			p value	Frequency of psychiatric morbidity (%)			p value
	Cases	Non-cases	Total		Cases	Non-cases	Total	
Confiding support				chi square= 0.01				chi square= 0.09
Low	30(29.1)	73(70.9)	103	p=0.91	15(14.6)	88(85.4)	103	p=0.76
High	113(28.6)	282(71.4)	395		53(13.4)	342(86.6)	395	
Practical support				chi square= 1.34				chi square= 2.69
Low	67(31.3)	147(68.7)	214	p=0.246	23(10.7)	191(89.3)	214	p=0.10
High	76(26.6)	210(73.4)	286		45(15.8)	239(84.2)	284	
Negative support				chi square= 0.13				chi square= 66.46
Low	71(29.5)	170(70.5)	241	p=0.72	26(10.8)	215(89.2)	241	p=0.000
High	72(28.0)	185(72.0)	257		42(54.5)	35(45.5)	77	

availability of people with whom respondents could talk frankly would be associated with their mental health. Other questions measuring level of social contact such as - frequency of visiting relatives, frequency of visiting friends, number of friends seen every month, frequency of contact with friends by letter, frequency of attendance of religious services and frequency of inviting people for meals were also not significantly associated with psychiatric morbidity.

To explore if a combination of these items had any association with women's morbidity, the two social network scales formed by Stansfeld and Marmot (1992) (see section 3.2.5 and for more details appendix G) were used to explore the association between social networks and gynaecological and psychiatric morbidity. There was no significant association between the isolation scale and psychiatric morbidity (table 3.33) for cut-off point 7/8. But when the cut-off point is raised to 8/9 then there is a significant association between the isolation scale and psychiatric morbidity (table 3.34). Thus women who are isolated are more vulnerable to psychiatric morbidity. However there is no significant association between gynaecological morbidity and the two social network scales. For comparative analysis, the definition of gynaecological morbidity was revised to presence of two or more gynaecological morbidities and association with social networks analyzed. No significant association was seen between social networks and gynaecological morbidity, indicating that being isolated or having a poor network does not influence the presence of gynaecological morbidity.

TABLE 3.33: SOCIAL NETWORKS BY MORBIDITY

Social networks	Frequency of gynaecological morbidity (%)			p value	Frequency of psychiatric morbidity (%)			p value
	Cases	Non-cases	Total		Cases	Non-cases	Total	
Isolation scale				chi square= 0.15				chi square= 2.98
Isolated	232(50.1)	231(49.9)	463		75(16.2)	388(83.8)	463	
Not isolated	102(51.8)	95(48.2)	197	p= 0.69	43(21.8)	154(78.2)	197	p= 0.08
Household scale				chi square= 2.97				chi square= 1.31
Poor network	200(48.3)	214(51.7)	414		67(16.2)	347(83.8)	414	
Good network	129(55.4)	104(44.6)	233	p= 0.08	46(19.7)	187(80.3)	233	p= 0.25

TABLE 3.34: SOCIAL NETWORKS BY REVISED GYNAECOLOGICAL AND PSYCHIATRIC MORBIDITY

Social networks	Frequency of gynaecological morbidity (%)			p value	Frequency of mental illness (%)			p value
	Cases	Non-cases	Total		Cases	Non-cases	Total	
Isolation scale				chi square= 0.02				chi square= 5.1
Isolated	341(73.6)	122(26.4)	463		411(88.8)	52(11.2)	463	
				p= 0.90				p= 0.02
Not isolated	146(74.1)	51(25.9)	197		162(82.2)	35(17.8)	197	
Household scale				chi square= 0.67				chi square= 0.83
Poor network	309(74.6)	105(25.4)	414		364(87.9)	50(12.1)	414	
				p= 0.41				p= 0.3
Good network	167(71.7)	66(28.3)	233		199(85.4)	34(14.6)	233	

3.4.7 Summary of main results

- 17.9% of the women reported the presence of psychiatric morbidity when 7/8 was taken as the cut-off point for caseness and 13.2% reported psychiatric morbidity when the cut-off point was taken as 8/9.
- 27.5% and 21.3% women who report at least one or two gynaecological morbidities respectively also report psychiatric morbidity.
- Gynaecological and psychiatric morbidity were not associated with respondent's and husbands' education, family monthly income and sterilization history of the respondent.
- Gynaecological and psychiatric morbidity were associated with presence of major illness of respondent and psychiatric morbidity with respondent's age, religion and employment. More women in the younger age group (26-35) report gynaecological morbidity and those in the older age group (36-45) report psychiatric morbidity respectively. Women employed for wages reported higher caseness for psychiatric morbidity and women with a major illness also reported higher gynaecological and psychiatric morbidity.
- Gynaecological morbidity affected women's physical health, changed their sense of self worth and personal dignity and effected their social mobility (attendance and participation in functions).
- Women perceived the presence of gynaecological symptoms as a 'natural consequence' of being a woman (it happens to all women) but also feared future fatal/terminal illness resulting from gynaecological symptoms.

- Levels of social support from closest or second close person are not associated with gynaecological or psychiatric morbidity. But when the definition of gynaecological morbidity is revised to include the presence of two gynaecological morbidities then higher levels of confiding support from second close person are associated with higher reporting of gynaecological morbidity.
- Lower levels of confiding and practical support from the spouse are associated with the presence of higher psychiatric morbidity in women. This remains the same if presence of psychiatric morbidity is revised to cut-off point 8/9.
- Levels of support from non-spouses are not associated with psychiatric morbidity in women. If 8/9 is taken as the cut-off point for psychiatric morbidity then higher levels of negative support are associated with the presence of psychiatric morbidity in women. Levels of support received from spouse and non-spouse are not associated with gynaecological morbidity.
- Measures of social contact such as number of people available for frank talk, frequency of visiting relatives and friends, number of friends seen every month, frequency of contact with friends by letters, frequency of attendance of religious services and frequency of inviting people for meals are not singly associated with the presence of either morbidity in women.
- The isolation scale is associated with psychiatric morbidity; women who are more isolated report higher psychiatric morbidity.
- Neither of the social network scales -isolation scale or beyond the household scale are associated with gynaecological morbidity.

The significance for public health of these results is discussed in the next chapter.

CHAPTER FOUR: DISCUSSION AND POLICY IMPLICATIONS

The research findings presented in the last chapter are discussed here against the background of the increasing global awareness of women's health problems (chapter 1). The emphasis here is on gynaecological and psychiatric morbidity in developing countries especially in poor urban communities. The chapter is in four parts. The first part is a methodological assessment of the thesis and the second part discusses the major findings with regards to the study objectives. The next section discusses the policy implications of the main findings of the study and section four the future research needs in this area.

This study has shown that low-income urban women in zhopadpattis carry a heavy burden of disease -both physical and mental. The study demonstrates that the women have a systematic (ethno-etiological) model to explain their gynaecological morbidity symptoms. This model, though different in its causal explanations and treatment pattern from the bio-medical model, recognises the effect of the morbidity symptoms.

4.1 METHODOLOGICAL ASSESSMENT

4.1.1 Emic and etic approaches

It is increasingly recognised that cross-cultural research, especially in the fields of psychology, social psychiatry, public health and social work, to investigate the validity of the concepts and diagnostic categories requires a process of validation that

combine/integrate epidemiological and anthropological frameworks (Laungani 1996; Weiss et al., 1995; Ongel and Smith 1994; Triandis et al., 1993). The spate of studies in health research in the last two decades which have used a combination of the emic and etic approaches bears evidence to this. However, cross-cultural studies are confounded by two major problems: conceptual and methodological.

A closer look at the research literature in India shows that researchers have accepted the conceptual framework provided by Western, in particular North American investigators (Laungani, 1996). There has been very little attempt to understand and conceptualise local perspectives. A content analysis by the Journal of cross-cultural psychology (JCCP) of the articles published in the last 25 years shows that the majority of studies were designed to test theories that originated in the United States (Ongel and Smith, 1994). The review showed that although there has been a growing interest in indigenous approaches (Moghaddam, 1990; Sinha, 1984, 1986) they have found almost no place in JCCP. This was also seen to be true for Indian journals (Ongel and Smith, 1994 quoting Adair et al., 1993).

Further, although the emic and etic approaches have been widely discussed by many psychologists (Ongel and Smith quoting Jahoda, 1977, 1983; Triandis, 1972) since their introduction into cross-cultural psychology (Pike, 1967), the JCCP review and and other studies (Laungani, 1996) show that most of the studies (93%) were imposed etic, that is where the conceptual framework and categories were based on the original framework. Only 1% (7/591) of the studies were derived etic, that is where the study attempted cultural decentering by attempting to understand and conceptualise concepts

which would reflect local perspectives. Thus what is required is appropriate definitions of the concepts under study to reflect to a large extent the social and philosophical preconcerns of a given culture. For example if etic studies are to be replicable then the concepts (such as gynaecological morbidity or mental health) need to be re-conceptualised and operationalised in a manner which would not only reflect the unique cultural arrangements of the country (say India) but also permit genuine and meaningful cross-cultural comparisons as in the case of the Explanatory Model Interview Catalogue (EMIC) derived by Weiss et al. (1995) which provides a method for cultural epidemiology to establish a clinical ethnographic database that addresses issues in culturally valid psychiatry. Weiss et al. (1995) report that personal meanings and other aspects of phenomenological and subjective experience need to be incorporated into psychiatric evaluation and practice. This besides facilitating empathic clinical alliance would also enable therapists to work with patients beliefs and provide a more powerful framework for addressing questions of cultural validity in multicultural clinical settings such as in India and for international comparisons.

Thus if etic studies are to be replicable then the concepts (such as gynaecological morbidity or mental health) need to be re-conceptualised and operationalised in a manner which would not only reflect the unique cultural arrangements of the country (say India) but also permit genuine and meaningful cross-cultural comparisons. The imposed etic or weak etic studies leave us with only borrowed Western concepts and Western research instruments which may be applicable only to Westernised English speaking, minuscule minority of the Indian population (Laungani, 1996). Such studies

would not allow us to draw any firm conclusions about differences and similarities either within cultures and/or among cultures.

Thus studies which reflect a strong theory base become mandatory if comparative cross-cultural studies are to be undertaken. A theoretical model to meet these requirements has been postulated by Laungani (1996). The model argues that each society acquires and operates from within a set of core values which are reflected in the salient attitudes and social and individual behaviours of people within that society. Although Western societies in general tend to operate on pluralistic value-systems which may explain attitudinal and behavioural diversity, it is the fundamental core values which bind and cement the social structures of society, even permitting diversities and deviations (pg 11).

Further several methodological issues also need to be taken into consideration when planning research, especially in a country as diverse as India. Factors such as differential levels of education, different religious beliefs and attitudes, multiplicity of languages and dialects are likely to influence the choice of the research project, its design and execution (Laungani, 1996; Weiss et al., 1995). These methodological issues explain the scarcity of derived etic studies in cross-cultural research.

In the current study, the gynaecological morbidity survey instrument was a weak derived etic as it was derived from emic categories of gynaecological morbidity studies conducted in other developing countries and other parts of India. The SRQ-20 was a derived etic as the categories within the SRQ-20 had been previously validated in

India in the local language. However, the gold standard against which it was validated is an imposed etic as it is based on Western categories of depression and anxiety. The CPQ used to measure social support and networks was an imposed etic as though it was rigorously pilot-tested the categories were not emically derived. The in-depth interviews were an attempt to study the local perspectives and experiences of gynaecological morbidity of the women where their cultural framework was probed to understand the meanings of distress expressed by them.

4.1.2 Integration of methods

The importance of triangulation of methods (Jick, 1983; Rubenstein, 1984; Mechanic, 1989; Heggenhoughen and Clements, 1987; Steckler *et al.*, 1992; Brabin, 1992; Campbell and Graham, 1990; Zurayk *et al.*, 1993; Yach, 1992) was discussed in chapter 2. For the present study a combination of quantitative and qualitative research methods was adopted to meet the research objectives. This technique allowed for coverage of a fairly large study population (660+36) in which 660 respondents were interviewed through structured interviews and at the same time enabled the in-depth interviewing of 36 respondents concurrently. Quantitative methods were used to investigate the prevalence of self reported gynaecological morbidity, availability of social support and social networks and 'cases' of psychiatric morbidity in the respondents; while qualitative methods were used to investigate the women's emic perspective of gynaecological morbidity. This combination of methods enabled the measurement of both the effect of gynaecological morbidity and its management by the women but also measured the prevalence of reported gynaecological and

psychiatric morbidity in the respondents. For example quantitative results show that (table 3.19) 50.6% of the women reported gynaecological morbidities. Section 3.3.3 also shows that each woman reported 1 to 6 morbidities each. Table 3.22 shows that 17.9% of the women reported psychiatric morbidity. Table 3.23 clearly shows that at least 27.5% of women reporting gynaecological morbidity also report psychiatric morbidity and table 3.25 shows that respondent's work status/occupation, religion and presence of a major illness was associated with the presence of psychiatric morbidity. Tables 3.4 to 3.11 and 3.13 to 3.15 show the association between availability of social support and social networks and the socio-demographic characteristics of the respondents. Women with formal schooling, whose husband's had formal schooling and women who work for wages receive moderate to high confiding and practical support and lower negative support.

It was through qualitative methods however, that one could clearly determine what effect the gynaecological morbidity had on the women and its management by the women, as the findings in section 3.3 illustrate. Most of the gynaecological symptoms are viewed as natural and a result of being a woman, of hard work and a socio-economic situation which marginalises women. Similar findings have been reported by researchers in Egypt, Bangladesh, South Africa and several parts of India (Khattab 1992, Wasserheit *et al.*, 1989; Cooper *et al.*, 1991a,b; Gittelsohn *et al.*, 1994; FFWH team 1994).

Women's perception of morbidity and its management would not have been understood if only quantitative data was used. The fact that women are well aware of

the serious nature of the symptoms they reported would have been difficult to elucidate (chapter 3 section 3.3.2). Quantitative data indicated that RTIs were the most often reported morbidity. However rank ordering of illnesses by the key informants indicated that women perceived stomach pain or weakness as more serious than say severe abdominal pain, which is a symptom of RTI. This would not have come to light if qualitative methods had not been employed. Further it was through body mapping only that it was learnt that women attributed lower abdominal pain to presence of 'vayugola' and not to RTIs and thus neglect it or treat it with herbal remedies at home.

Today, when its recognised that 'good research' is that which is closely linked to intervention, qualitative methods and more specifically participatory methods (Rifkin and Annett, 1991) such as focus groups, body mapping, free listing are an important tool in tackling culturally and politically sensitive topics such as reproductive health and more specifically gynaecological symptoms. These methods not only help to define the domain of the study as perceived and understood by the women (Weller and Romney, 1988; Bernard, 1988) but also as stated by Khanna (1994), to empower the women in the process of data collection by helping them to gain confidence, analyze their situation (as in body mapping or rank ordering illnesses) to change their perception of the illnesses (as shameful and dirty and therefore not to be talked of), and finally claim and accept them (by discussing their presence).

4.1.3 Limitations: expected and unexpected

Only self reported morbidity was included. This was intentional to focus on the emic perspective of gynaecological morbidity. The check list for investigating gynaecological conditions in the survey included only those symptoms/morbidities which could be clearly identified with a check list. This method necessarily excluded those gynaecological morbidities which are asymptomatic (Brabin *et al.*, 1995). For example cervical infections are frequently symptomless.

Certain related morbidity conditions such as anaemia, obesity and hypertension were not included in this study as although they are reported (Younis *et al.*, 1992) to be risk factors for gynaecological morbidity. In the absence of medical examination and laboratory tests these related morbidities would have been difficult to identify and confirm. Further, as the respondents for this study were low-income women and most of them were in the younger age group (16-35 years) and the risk for obesity and hypertension is reported (Younis *et al.*, 1992) to be significantly higher for older (and obese for hypertension) women, it was considered unnecessary to explore these conditions.

Only women residing in the community, ever married, in the reproductive age group, married for at least two years, not currently pregnant, not menopausal and not post-natal ammenorhoeic, with no history of severe mental illness were included in the study. As explained in section 2.3.3 these inclusion criteria were considered necessary in self reporting of morbidities, in order to investigate all the stated gynaecological

symptoms without confusing them with similar symptoms related to other conditions (such as pregnancy). Exclusion of women with severe mental illness was necessary to later avoid confounding the association between gynaecological with psychiatric morbidity. Thus the sample is not truly an unbiased community sample.

Gynaecological morbidity symptoms reported by the women could have been validated in the study in several ways. **Reliability** could have been tested by re-administering the gynaecological morbidity check-list to a sub-sample of the women. However, as a sub-sample of the women were to be later chosen for in-depth interviews to explore the emic perspective of gynaecological morbidity, this was not done in order not to compromise the response or limit the sample for selection of key informants for the qualitative interviews. Further, reliability could have been tested by cross-checking the responses of the survey instrument with either the husband or the neighbour/friend. However, this approach is unlikely to be fruitful since women reported that they rarely discussed the gynaecological symptoms with others due to feelings of shame.

Face validity The check-list to probe for gynaecological morbidity symptoms was prepared by selecting items from nine similar questionnaires in other developing countries. Further, the face validity of the questionnaire seems good as the questions were easily understood by the women and they readily co-operated in answering them. The **criterion validity** could have been tested by using gynaecological examinations and laboratory tests as a gold standard on a sub-sample of the women who reported gynaecological morbidity. This was not feasible due to limited financial resources . The validity could also have been tested by comparing the in-depth qualitative interviews with the survey instrument. Though this was not done in a systematic

fashion, the responses to both instruments and the analysis of the in-depth interviews indicates that the responses were similar to both the instruments, even if the perception of seriousness of certain symptoms was different (table 3.17).

A hospital sample was taken to validate the SRQ-20 against a gold standard, as a trained psychiatrist could not be arranged to interview a sub-sample of the women in the community within resource constraints of the study. Further a sample of the community women could not be sent to a nearby hospital as the psychiatrist was available only in the morning hours when the women were unavailable. However, a random sample of women from a similar socio-economic background (chapter 2 section 2.3.5.2) reporting for general ailments such as fever to the out patients department of another department of the hospital were included in the validation study. There was no significant difference between the age, income, marital status and occupation of the two groups. Religion, ethnicity and education were significantly different. As each slum community has its own geographical pooling (section 2.3.5.2) the difference in religion and ethnic distributions was expected. Moreover as Bombay slum communities house older migrants, the higher educational status/level was also expected. Thus the results were not compromised.

The CPQ to measure social support and networks of the respondents measures up to 4 close persons. However most of the respondents were willing to nominate only the closest person (mostly spouse) and sometimes a second close person. Thus all respondents nominated a closest person but only some (77.4%) (chapter 3 section 3.2) nominated a second close person. However, Stansfeld and Marmot (1992) report that

in their study they found the nomination of 2 persons the most reliable, that is the first two persons provide most support and are most reliably measured (chapter 2 section 2.3.6.). The re-test reliability results of the present study, presented in section 2.3.6.4 of chapter 2 also echo the same findings. Further, the social support and social network questions of the CPQ had only fair reliability (table 2.7 and 2.8) indicating that the instrument needs refinement before being taken further. The confiding support questions were the least reliable. Thus, though the CPQ allows nomination of persons who provide support and respondents can nominate closest and second close persons, the study results indicate that in settings where literacy is low and respondents in transition, nomination of close persons introduces an artefact which lowers the reliability of the instrument. In such settings the close persons could be nominated/specified by the researcher to improve the reliability of the instrument. Further research is needed in this area to develop and refine instruments to measure social support and networks in urban settings.

This study was essentially a descriptive study which did not aim to identify or determine which variables were risk factors for gynaecological morbidity or which variables were independently related to it. However, further exploration of the data using multivariate analysis could be done to control for potential confounders such as age, education, employment, urban residence and monthly income and thus establish results as was done for the association seen between isolation and psychiatric morbidity in older women. Similarly, multivariate analysis, such as statistical modelling could have helped to establish associations between the different gynaecological morbidity symptoms and social support and networks and psychiatric

morbidity. Although such analysis may be undertaken at a later date, it was felt to be outside the scope of the current study.

The qualitative techniques of free listing and rank ordering of illnesses were used to define the domain of 'women's illness' and to rank the order of seriousness of these symptoms/illnesses as perceived by the women. However not all the key informants were willing to list illnesses (due to culture of silence surrounding gynaecological morbidities) and due to some women's lack of confidence as a result of no formal schooling and women's status in society. They were thus not familiar with the interview method especially methods which required concentration and reflection in areas totally alien in their earlier discussions with health providers or other women. Thus some of the women did not free list or rank order the illnesses. However generalisation of the findings for this sample and similar samples is not an issue as coverage of all possible responses was done with the sub-sample.

4.2 MAJOR FINDINGS

The main findings summarised in table 4.1 are discussed in further detail below.

TABLE 4.1: SUMMARY OF MAJOR FINDINGS

MAIN OBJECTIVES	METHOD	MAJOR FINDING(S)
1. Study the emic perspective of gynaecological morbidity in women	-survey questionnaire -in depth interviews	-women's explanatory model of gynaecological morbidity shows that they have a limited understanding of the biomedical pathology of gynaecological morbidity and their perception is based on a bio-cultural framework -gynaecological morbidity are perceived as a 'woman's lot' or natural consequences of being a woman and as 'dirty' and 'shameful' -the morbidity effect the women's sense of self-worth and dignity, restrict their social mobility and their ability to carry on with daily chores -the implications of these morbidity are clear to the women and they have secret fears about the long term effects of their presence -women seek a combination of allopathic and alternative systems of treatment
2. Study the association between gynaecological and psychiatric morbidity	-survey questionnaire -in depth interviews -SRQ-20	-27.5% of the women who reported gynaecological morbidity also reported psychiatric morbidity
3. Study the role of social support and social networks in gynaecological and psychiatric morbidity	-survey questionnaire -CPQ -SRQ-20	-confiding, practical and negative social support are not associated with gynaecological morbidity -women who are more isolated report higher psychiatric morbidity -frequency of meeting friends, relatives, work mates and attending meetings at clubs, mandals and religious places is not associated with either gynaecological or psychiatric morbidity

4.2.1 Self reported morbidity

Although in the 1980's maternal health, especially as related to maternal mortality received increasing international attention (Younis *et al.*, 1992, Wasserheit and Holmes, 1992) very little was known about the prevalence of gynaecological morbidity in developing countries. A few studies reporting reproductive morbidity, with some emphasis on RTIs (Germain *et al.*, 1992) used primary hospital based data. In the last 5-6 years several community based studies (Bang *et al.*, 1989; Wasserheit *et al.*, 1990; Younis *et al.*, 1992; Brabin *et al.*, 1992 & 1995; Shatrugana *et al.*, 1993, Chatterjee, 1994; Bhatia and Cleland, 1995) have brought to light the high prevalence of gynaecological morbidity in communities in the developing world. Gynaecological

morbidity is assessed/measured in these studies through medical examination or self reporting of symptoms, validated through medical examinations and/or laboratory tests.

Some of the recent studies on gynaecological morbidity (Younis *et al.*, 1992; Shatrugana, 1993; Chatterjee, 1994; Gittelsohn *et al.*, 1994; Bhatia and Cleland, 1995) use a combination of quantitative and qualitative research methods. All the above studies including this study use self reported morbidity to assess gynaecological morbidity in women. These studies do not attempt to assess the occurrence of gynaecological problems in a totally subjective manner (cross refer to section 3.2 of chapter 1). In this study the survey questionnaire on gynaecological morbidity elicits women's perceptions that they are experiencing symptoms of bio-medically defined morbidities. There is no certainty about the diagnostic accuracy of these symptoms and the relationship between self reported symptoms and clinically verifiable conditions in the study are uncertain. As in other similar studies, the symptom categories are only suggestive of the corresponding medical conditions and for accurate clinical diagnosis require referral for detailed examination and/or laboratory testing. The importance of self reported morbidity is however unquestionable as succinctly put by Bhatia and Cleland (1995), " Regardless of the imprecise correspondence between reported symptoms and medically verifiable conditions, perceived ill-health is important in its own right because it determines health seeking behaviour ....moreover the results on treatment ...suggest that most women do not regard these symptoms as trivial or inconsequential"(Pg. 6).

Moreover in most developing countries most women are generally reluctant to subject themselves to medical examinations (Bang *et al.*, 1989; Wasserheit *et al.*, 1989) resulting in high refusal rates, which introduce selection biases in such studies. This makes validation of the responses with clinical/medical examination difficult to interpret. In view of these difficulties, and the availability of sophisticated screening procedures limited to hospital settings, interview surveys remain one of the few options for gauging women's health. A review by Campbell and Graham (1990) also concludes that instruments developed jointly by social scientists, medical professionals, demographers and bio-statisticians can gather much useful information on perceived morbidity at the community level.

4.2.2 Prevalence of different morbidities

Younis (1992) reports that 97% of respondents had at least one gynaecological or related morbidity condition (anaemia, hypertension, obesity, and urinary infection) in a community in rural Egypt; Wasserheit *et al.*, (1989) reported a prevalence of 68% RTIs in a symptomatic population in Bangladesh; Bang *et al.*, (1989) report that 92% women reported at least one gynaecological morbidity in a rural/tribal area in India; Brabin *et al.*, (1995) report self reported gynaecological morbidity in adolescents and young women in rural Nigeria between 7% to 87% (for menstrual problems and vaginal discharge respectively). A recent study in low-income urban women in Ahemdabad reports gynaecological morbidity amongst women working for wages to range from 51% to 54%, whilst a study in a cross-section of low-income urban women in Madras in India reports 30% prevalence of gynaecological morbidity. Bhatia and

Cleland (1995), report 33.3% prevalence of reproductive and related morbidity conditions in an urban and rural population near Bangalore in India. Women mainly reported menstrual problems (7.3%), reproductive tract infections (22.1%) and anaemia (23.4%).

The prevalence of gynaecological morbidity reported by this study falls within the range reported by similar studies detailed above. Several factors such as, exclusion of most related morbidities (especially anaemia) except urinary problems and abortion and sterilisation related morbidity, asymptomatic cases (as morbidity was self reported) and a very rigorous check list to identify gynaecological morbidity could explain the lower reporting compared to studies such as the Bang *et al.*, (1989) and Younis *et al.*, (1992). On the other hand the fairly high reporting of gynaecological symptoms could be explained by the high response rate (98%) and use of participatory methods in conjunction with quantitative methods.

Community based studies in gynaecological morbidity have been faced by a low response rate especially to gynaecological examination (Bang *et al.*, 1989; Omran and Standley, 1981; Campbell and Graham, 1990). However when the qualitative approach (Gittelsohn *et al.*, 1994) is used (Younis *et al.*, 1992; Bhatia and Cleland, 1995) as in the current study, a response rate of 90% and above is reported.

This study reveals that half the women suffer from one or more gynaecological or related morbidity conditions (section 3.3, chapter 3). Other studies from different parts of India also reveal that most women report two or more gynaecological morbidity

symptoms (Bang *et al.*, 1989; Shatrugana *et al.*, 1993; Patel, 1994; Chatterjee, 1994; Bhatia and Cleland, 1995).

Of the reported gynaecological morbidity, RTIs account for the highest number of reported morbidity (33%) followed by menstrual problems (26.4%) and prolapse (12.1%). Younis *et al.* (1992), Brabin *et al.* (1995), and Wasserheit *et al.* (1989), also report a high reporting of RTIs, prolapse and menstrual problems.

The study closest to the present study (Bhatia and Cleland 1995) reports 22.1% of RTIs and 7.3% of menstrual problems, but prolapse is reported by only 0.4% women. Further no women report dyspareunia and only 1.5% and 0.2% report urinary problems and infertility. The low reporting of some of the morbidities could be explained by the inclusion criteria for the sample - as only women less than 35 years of age and with one living child under 5 years of age were included in the study. Prolapse is reported mainly by grand multiparous (5 or more previous deliveries) women or women who had protracted labour. Thus the Younis (1992) study, where 45% women were grand multiparous reveals very high reporting of prolapse (56.3%).

The large number of women reporting prolapse in the present study (12.1%) is a cause for concern. The risk of women with prolapse contracting RTIs/infections increases by as much as four times (Khattab, 1992). Qualitative responses also highlighted the daily difficulties faced by women reporting prolapse, such as difficulty in sitting down, during intercourse and in performing some daily household tasks (lifting water pots). Though prolapse (genital) is associated with age and number of deliveries (Younis et

al., 1992 citing Beck, 1983) besides parous women, in the present study prolapse was reported mainly by women in the 26-35 years age group (table 3.20). Further these women had on an average three living children. Thus the reporting of prolapse might possibly point to either protracted labour, home deliveries which were reported to be a risk factor (Bhatia and Cleland, 1995) or a heavy workload (reported by all the women), identified by Younis *et al.* (1992) as a possible risk factor for prolapse.

The reporting of RTIs in the present study is higher than reported by Bhatia and Cleland (1995). This could be explained by the nature of the sample, which is migrant (from rural areas of home state and other states). Most of the women from the Northern states migrate back to their native villages for part of the year to help with harvesting of crops and sowing of seeds. Some women live in the village for most of the year and come to the city (study community) for a few months in order to care for the older members in the house who reside in the village. This places the men (partners) living alone for most of the year in the cities more at risk of extra marital sexual relations and consequentially the couple's risk to RTIs. This could account for the higher reporting of RTIs in this study as compared to other studies in India (Bhatia and Cleland, 1995; Narayan and Srinivasan, 1994) where the sample was mainly rural. The high incidence of RTIs in the present study and other studies in urban India (Patel, 1994; Mulgaonkar, 1991) is a cause for concern as, if not diagnosed early and treated promptly they may seriously compromise women's health. As expressed by Younis et al. (1992), "this clearly raises great concern about the physical and social well-being of women as RTIs are known to cause physical discomfort, personal embarrassment and marital discord".

Menstrual problems were the second most commonly reported morbidity (26.4%). Other studies also report a similar incidence. Menstrual problems such as amenorrhoea and excessive bleeding could have implications for the women's fertility and consequent psycho-social complications.

Urinary infections are also reported by a substantial number of women (13.9%). The inadequate sanitary provisions in the slum communities and the insufficient water supply could increase the women's susceptibility to this infection.

Infertility (both primary and secondary) though not high was reported by a substantial number of women (5.3%) and could be indicative of infection. The direction of causation is ambiguous as infertility could be the outcome of a prior infection (contracted from partner) or a cause of subsequent infection (miscarriage and abortion). As reported by several studies (Paltiel, 1993 ;Wasserheit *et al.*, 1989) in developing countries, infertility may occur not only as a result of STD or toxic exposures in either partner but also from infections due to poor obstetric and gynaecological practices or acquired through untrained attendants in child birth and abortion.

Dyspareunia reported by a few women (2.6%) was higher than that reported by other studies in India. This could be either due to better reporting (due to good rapport or interviewing technique), but is suggestive of reproductive tract infection.

Abortion and IUD related morbidity were reported by very few women -maybe because of the exclusion criteria (section 3.2, chapter 1).

Alhough almost half the women were sterilised and most of the key informants reported onset or aggravation of gynaecological symptoms after 'operation' no significant association was found between women who were sterilised and those reporting menstrual problems, RTIs, dyspareunia or urinary problems. A significant association is seen only between women who are sterilised and reporting prolapse. No rationale presents itself for this except that as responses for gynaecological morbidity were multiple, maybe women with prolapse also reported RTI's, which could have occurred due to lack of hygiene during sterilisation or poor follow-up. This link between 'operation' and onset of morbidity ('due to weakness') needs to be further explored as it has implications for family welfare programmes (especially family planning). Bhatia and Cleland (1995) reported an association between sterilisation and RTIs and anaemia in their study. The association of sterilisation with anaemia (weakness) points to the cultural belief that sterilisation creates weakness.

4.2.3 Emic perspective of gynaecological morbidity

'like every tree has flowers every woman has white discharge' (Bang and Bang 1994).

The study showed that women described symptoms and morbidities such as lower abdominal pain, waist pain and prolapse as 'woman's illnesses' (section 3.3.1). They did not use bio-medical concepts or the medical model to define their symptoms or

illnesses but explained women's illness symptoms such as waist pain, 'tension', white and red discharge to weakness and stomach pain as women's illnesses. Irrespective of ethnic group and religious belief, the bio-cultural framework was used to explain their symptoms. Thus gynaecological morbidity symptoms were understood by the women as 'natural' to women and an innate part (or natural consequence) of a woman's life. For example white discharge was perceived as a result of frequent intercourse and lower abdominal pain a consequence of a heavy work load (section 3.3.3). Ethno-etiological explanations are also reported by other researchers from both low-income to middle income rural and urban populations (Patel , 1994; Kannani *et al.*, 1994, Bang and Bang, 1994) to explain presence of gynaecological morbidity. Table 3.21 gives the range of explanations for the different gynaecological morbidity. In sharp contrast to illnesses in children where women reported that they would immediately seek medical care their treatment seeking behaviour for gynaecological morbidity was as seen in table 3.21 a mix of the bio-cultural and bio-medical. Thus women apply balm on the area perceived to be the source of pain or provide fomentation. Their explanations ranged from humeral imbalances caused by hot foods (urinary infection) to prophylactic doses of tea and paracetamol to alleviate the pain. The contrast in perception can be explained by the very limited exposure that women have had to health education especially as related to gynaecological morbidity which are rarely discussed by the women even amongst themselves for fear of discussing 'dirty' and 'shameful' things.

Table 4.1 gives the major findings for the emic perspective (objective 1) and table 4.2 provides more finite details of the emic perspective of gynaecological morbidity.

TABLE 4.2: WOMEN'S PERCEPTION AND EXPERIENCE OF GYNAECOLOGICAL MORBIDITY

Issue	Method	Findings
Defining women's illnesses	Free listing	-illnesses ranged from weakness to lower abdominal pain and chest pain
Perception of seriousness	Rank ordering	-discharge, weakness perceived as most serious -headaches, body ache perceived as least serious
Definition and experience of Gynaecological morbidity/symptoms	Survey questionnaire and In-depth interviews and Body mapping	-gynaecological morbidity perceived as women's illnesses -only acute symptoms which interfered with ability to perform tasks and mobility perceived as serious -mild discharge or occasional pain ignored -most gynaecological morbidity not reported to health providers until acute as perceived as 'normal' to women (consequence of heavy work and/or frequent intercourse)
Effect of gynaecological symptoms on the women	In-depth interviews	-presence of gynaecological morbidity effects the respondents' physical health, lowers sense of self-worth and personal dignity and reduces social mobility -presence of gynaecological morbidity created a fear of future fatal illness in the women

4.2.4 Co-relates of gynaecological morbidity

Several recent studies have measured the prevalence (section 4.2.2) of gynaecological morbidity in developing countries and in different parts of India (rural and urban). Several of these studies have explored the risk factors to gynaecological and reproductive morbidity in poor women (Younis *et al.*, 1992; Wasserheit *et al.*, 1992; Bhatia and Cleland 1995) and others have studied the treatment seeking behaviour of women with gynaecological morbidity (Bhatia and Cleland, 1995) or the risk of women in certain occupations to gynaecological and other morbidity (Chatterjee, 1994; Shatrugana *et al.*, 1993). However though several studies have emphasized the psycho-social implications of (long term) prevalence of gynaecological morbidity in

women in developing countries, the life-time mental health consequences/associations of these circumstances remains unexplored. Further though most of these studies explore the association of socio-demographic characteristics of respondents to gynaecological morbidity no study has studied the effect of availability of social supports and networks in these two morbidities. This study explores these co-relates as well as the socio-demographic variables which make poor urban women vulnerable to gynaecological morbidity.

4.2.4.1 Mental health

The association of gynaecological morbidity with psychiatric morbidity was seen to be 27.5% to 21.3% in the respondents (table 4.3). The general reporting of minor psychiatric morbidities in the community was between 13.2% to 17.9% which is well within reported minor psychiatric morbidity rates. Reichenheim and Harpham (1991) report a prevalence of 36% in low-income women in Brazil. In the U.K prevalence rates of minor psychiatric disorder in the community are reported to be between 10% to 30% (Stansfeld *et al.*, 1995).

TABLE 4.3: SUMMARY OF FINDINGS ON GYNAECOLOGICAL AND PSYCHIATRIC MORBIDITY IN RESPONDENTS

Objective	Presence of morbidity	Association with social support and social networks
Gynaecological morbidity	-women reported one to six morbidity each. 50.6% women reported the presence of gynaecological morbidity, 24.4% reported one, 13.5% two and more than 12% three to six morbidity. -reproductive tract infections, menstrual problems, prolapse and urinary infections in that order formed the major proportion of the reported morbidity -respondents in the 16-35 years age group reported 87% of the morbidity with women in the 26-35 years age group mainly reported RTIs, menstrual problems, urinary infections and prolapse and women in the 36-45 years age group reported the least number of cases.	-levels of support received from closest, second close person or from spouse and non-spouse are not associated with gynaecological symptoms -measures of social contact such as number of people available for frank talk, frequency of visiting relatives and friends, number of friends seen every month, frequency of contact with friends by letters, frequency of attendance of religious ceremonies/services and frequency of inviting people for meals are not associated with either of the morbidity -gynaecological morbidity is not associated with either of the social network scales (isolation or beyond the household)
Association between gynaecological and psychiatric morbidity	-17.9% of the respondents reported psychiatric morbidity when 7/8 is taken as the cut-off point and 13.2% when the cut-off point is raised to 8/9. -27.5% respondents reporting gynaecological morbidity also report psychiatric morbidity when 7/8 is taken as cut-off point for psychiatric morbidity and 21.3% when the cut-off point is taken as 8/9.	-levels of support received from closest and second close person are not associated with psychiatric morbidity -women with higher levels of social support from spouse report lower psychiatric morbidity for cut-off points 7/8 and 8/9 -social support from non-spouses is not associated with psychiatric morbidity when 7/8 is taken as the cut-off point -respondents who received higher level of negative support from non-spouses reported more psychiatric morbidity when 8/9 is taken as the cut-off point -respondents who are more isolated report higher 'cases' of psychiatric morbidity
Gynaecological and psychiatric morbidity and socio-demographic variables	-no association between both morbidity and respondents' and husbands' education, family monthly income, religion and sterilisation history -gynaecological morbidity was associated with younger aged women (16-35) and psychiatric morbidity with women in the higher age group (35-45). -unemployment was associated with higher psychiatric morbidity -presence of a major illness was associated with higher reporting of both morbidity	-no association between the two morbidity and levels of support provided by closest and second close person

The association between the two morbidity conditions is fairly high, indicating a heavy burden of reported illness (both physical and mental) amongst poor women. As seen in 'section 3.4.3, women reported that the presence of gynaecological symptoms affected their physical health (weakness, fatigue, body pain), changed their sense of self-worth and personal dignity (due to inability to perform tasks and feeling of being 'dirty') and effected their social mobility (inability to participate in functions/ceremonies).

Results indicate that there is a significant association between women in the higher age group (36-45) and psychiatric morbidity. Studies in Argentina, Guyana, Costa Rica and Chile also report that older women in slum/migrant communities are more susceptible to mental ill-health. Paltiel (1993) reports that lack of friendship, lower income security, weakening of traditional family obligations and caring for older senile relatives and grandchildren may be contributing factors.

As expected, women who were employed, suffered from a major illness such as kidney problems, lumps in breast etc and women who were non-Hindus, especially those belonging to minority groups reported higher 'caseness' for psychiatric morbidity (table 3.24). Stansfeld *et al.* (1995) report that there is increasing evidence that work related social support may be a powerful protective factor against minor psychiatric disorder, in sharp contrast to the findings of this study. However only presence of major illness was associated with gynaecological morbidity. The direction of causation remains ambiguous here as the time of onset of the major illness and gynaecological and psychiatric was not explored.

Bhatia and Cleland report a positive association between non-Hindus, rural, low economic status, young women (20-24 years), poor personal hygiene, poor exposure to health education and non-users of contraception to gynaecological morbidity. Younis *et al.*, (1992) and Wasserheit and Holmes (1992) also report similar findings from other developing countries. In this study though the frequency of women reporting gynaecological morbidity in the younger age group (16-35), educated below matric and in the lower income group is higher, no significant association is reached. Respondent or spouse's education, religion or employment status also do not affect the reporting of gynaecological morbidity. This indicates that almost all women in the slum community have similar access to treatment (social and economic) and are equally likely to report gynaecological morbidity.

4.2.4.2 Social support and networks

Only 77.4% women nominated a second close person who provided social support. Of this 18.8% respondents nominated their spouse as close person. Thus most women did not have close persons who could provide support from outside the immediate family. One of the primary reasons for this could be that most women (71.1%) had been resident in the community between 1-10 years. Most women reported receiving high levels of confiding and practical support from spouse. They also reported a high negative support from spouses, that is negative comments, which resulted in more worries and anxieties for the respondent. Thus the availability of confiding and practical support from spouse may only be indicative of the lack of autonomy/freedom imposed on the women which results in her dependence on the spouse for all support.

This is substantiated by the fact that the only 'outside' activity that most women participate in is religious functions. Their social networks are limited to inviting people for meals at home or visiting relatives. Only 4.2% of the women were members of mahila mandals (women's groups) or other organisations.

Not surprisingly, women with formal schooling and/or higher levels of schooling receive high levels of confiding support from closest person and confiding and practical support from closest and second close person, possibly because they were better equipped to deal/manipulate the environment. Similarly respondents with spouses with higher education also receive higher confiding support from closest and second close person.

As reported by other studies women who are employed for wages receive moderate to high levels of all three support from closest person. Women with higher family incomes also receive more negative comments and higher practical support from closest person. They receive higher confiding support from second close person, though results related to confiding support need to be interpreted with caution due to the low reliability of the questions relating to confiding support. Women with formal schooling and higher family income are less isolated, possibly again because of their ability/access to a wider network.

High confiding levels of social support from the second close person are associated with presence of gynaecological morbidity. Women normally do not report the presence of gynaecological morbidity due to their association with 'shame'. However the association of confiding support with gynaecological morbidity could indicate that the availability of confiding support motivates the women to report the morbidity. Interestingly confiding support from the closest person (mainly the spouse) does not motivate the women to report the morbidity. In the in-depth interviews most women reported that they had discussed the presence of the morbidity with their spouses. Thus unlike in other physical illnesses where the husband is the decision maker, for gynaecological morbidity close persons such as neighbours, female relatives, friends and mothers influence the reporting of morbidity.

Women who receive low levels of confiding and practical support from spouses report higher psychiatric morbidity as expected. In case of non-spouses, only when the definition of mental ill-health is revised, do higher levels of negative support indicate psychiatric morbidity. Women who are more isolated have predictably higher psychiatric morbidity.

The findings on social support and networks are summarised in table 4.4.

TABLE 4.4: SUMMARY OF FINDINGS ON SOCIAL SUPPORT AND SOCIAL NETWORKS

Objective/issue	Sub-study/method	Findings
Availability of Close persons	Close persons questionnaire (CPQ)	-all respondents nominated a close person -77.4% nominated a second close person -65.6% & 18.8% respondents nominated spouse as closest and second close person respectively -most close persons were spouses and were currently married, had stayed with respondent for 11 years and had 'seen close person' for 26 days or more in that year
Availability of Social support	CPQ	-respondents receive high levels of support for confiding and practical support from closest and second close persons, whereas for negative support higher levels of support are received from the closest person (negative finding) but low negative support from second close persons -respondents receive high levels of confiding and practical support from both spouses and non-spouses. More high support is received from spouses than non-spouses. Higher negative support (more negative comments) is also received from both spouses and non-spouses, but is the highest from spouses. -thus higher negative support is received from spouses and closest persons(not surprising as most of the closest persons are spouses)
Availability of Social networks	CPQ	-1 to 10 persons were available for 87.6% of the respondents for frank talk. Over 70% attended religious ceremonies, almost all invited people for meals, over 80% visited relatives and over 95% did not participate in any voluntary activity. Only 4% were members of local women's groups or bhajan mandal or organisation.
Social support and socio-demographic variables	Survey questionnaire and CPQ	-respondents with formal schooling or higher level of schooling receive high levels of confiding support from closest persons, and high level of practical support from second close person -respondents with spouses with formal schooling receive high levels of confiding support from closest and second close persons -respondents who work for wages receive high level of support for all three kinds of support from closest person and high level of practical support from second close person -respondents with higher monthly family income receive high practical support and low negative support from closest person and high confiding support from second close person. Respondents with a family income higher than 3000 rupees also receive low negative support from second close persons.
Social networks and socio-demographic variables	Survey questionnaire and CPQ	-respondents with formal schooling or higher level of schooling have good networks beyond the household and are less isolated on the isolation scale -husband's educational status has no association with respondent's social networks -respondents who work for wages are more isolated -respondents with high monthly family income are less isolated and have a good social network beyond the household.

4.3 POLICY IMPLICATIONS

The main function of the findings of this study is to contribute to the development and growth of more sensitive programmes for women in communities, especially low-income urban communities in the area of reproductive and mental health through the strategy of early treatment of reported gynaecological symptoms, integration of mental health services at the primary level and provision/access to social support and networks (more jobs, clubs/ organisations) which bring women into the mainstream.

The implications of the key findings and recommendations emanating from this study are discussed in detail below.

4.3.1 Perception of gynaecological morbidity

Firstly, large number of low-income urban women in communities, in the reproductive age group who are not pregnant or in the post-partum phase report gynaecological morbidity. Other studies (Bhatia and Cleland, 1995) report the association between gynaecological morbidity symptoms and obstetric problems and complications associated with the last live birth. Unlike symptoms associated with a pregnancy or childbirth, gynaecological symptoms occurring outside these episodes, where the outcome involved comprises only the women's health are primarily ignored by the women and the current health system.

As seen in sections 3.3.4 and 3.4.3 the women are neither unaware of the consequences of the gynaecological morbidity symptoms, nor do they ignore them. Their perceptions of 'shame' and 'guilt' associated with the symptoms, as in the case of white discharge or dyspareunia (suggestive of RTIs) and the definitive framework (ethnomedical) they use to explain these symptoms, force them to resort to home remedies, cope with the symptoms by accepting them as 'natural' to women or seek treatment from practitioners of alternative/complementary medicine, local chemists or sometimes the local health clinic.

The 'cultural silence' surrounding these morbidities, by which women do not refer to the symptoms/illnesses directly, but use euphemisms such as weakness or waist pain to denote them, alienate them from the health system which recognises only the bio-medical model. Further socio-economic factors such as unemployment, fear of medical examinations and the gap in social class between health providers and patients inhibit the women from seeking treatment (especially in the early stages) at the local government clinics.

Urban health posts were advocated for low-income urban populations in 1982 in India in recognition of the special primary health needs of the urban poor. The Thane municipal corporation responded by starting the first urban clinics in 1987. However the narrow emphasis in the health programmes of women as mothers has meant that many women are not served and many reproductive health problems are not treated. As echoed by Pachauri and Gittelsohn (1994), programmes need to be designed such that they enable women to better articulate their needs and to better utilize available

health services by expanding the programme to address all reproductive health needs of the women. This can only happen if women are viewed not only in terms of their reproductive roles but as individuals in their own rights whose health is affected by the reproductive process.

The health service system has to be sensitised and made more responsive to women's multiple reproductive health needs. The programme thus argues for focusing on decision makers in the communities and the women themselves through innovative strategies (health education which uses/recognises the ethnomedical framework) to involve the community as a whole and enhance their participation in the programme. Integration of efforts to jointly address a programme on prevention and control of RTIs, STIs and HIV/STDs in the current MCH programme could be one answer.

Special emphasis is definitely required in the health system on the morbidity reported extensively by the women such as menstrual problems, RTIs and prolapse many of which further increase the women's susceptibility to reproductive morbidity. The close relationship between RTIs and family planning (use of certain contraceptives such as IUD and high RTI morbidity) is an increasingly recognised issue (Caldwell *et al.*, 1989; Rosenburg *et al.*, 1986) and the possible consequences for the family planning programme.

Associated symptoms like infertility, association of 'operation' with infections such as RTIs, infertility, menstrual problems and prolapse which are of concern to the women need to be addressed by sensitising health providers to the women's

perceptions and introducing more rigorous screening procedures for RTIs, STIs etc. when providing current services such as contraception (sterilisation and the reversible methods) as well as timely follow-up services if the women's health is not to be compromised or the government programmes such as the family planning programme, safe motherhood programme or child survival are to succeed.

4.3.2 Mental health

Secondly, this study reveals that 17.9% of the respondents report psychiatric morbidity. This implies that women in communities have a heavy burden of mental ill-health. Harding *et al.*, 1980) report that 15% of all primary care attenders across the world have a psychiatric disorder. It is reported (Blue *et al.*, 1995 citing the World Development Report 1993, World Bank 1993) that there is a growing evidence from both developing and developed countries that the prevalence of common mental disorders (depression and anxiety) among women is higher than that of men. Several studies in developing countries also report that there is a predominance of females among depressives both in incidence and prevalence studies in both institutions and community settings (Venkoba Rao, 1994:vi cited by Blue *et al.*, 1995). This predominance is reported in several epidemiological studies reviewed in Latin-America, Cali, Colombo, Taiwan and Sao Paulo, Brazil (Blue *et al.*, 1995).

The current study clearly demonstrates the high association between reporting of gynaecological morbidity and psychiatric morbidity in the community. Women who are unemployed, report a major illness, belong to non-Hindus castes and are older are

also seen to be more vulnerable to mental ill-health. The underlying reasons for women's vulnerability could be due to various explanations: women maybe willing to admit psychological distress, maybe effected by hormones, social class and the social roles and status of women and because of integration of feelings of lack of power and demand overload which causes an overall sense of loss of control (Blue *et al.*, 1995). Whatever the reasons, one fact emerges clearly -that women in urban communities report a fairly high incidence of minor psychiatric morbidities. This points clearly for the need for integration of mental health services at the primary health care level at both preventive and curative level.

4.3.3 Social support and social networks

Thirdly, the study shows that women who are isolated (meet friends, relatives, work colleagues rarely) are vulnerable to psychiatric morbidity. This implies that social networks of the low-income urban groups if not adequate could predispose them to mental illness. Women in the older age group reported higher psychiatric morbidity which implies that over a period of time when the ties with the native village are eroded and children have grown up/moved out, the women do not have alternative networks to provide support. Further, their socio-economic status bars the low-income groups from the city's existing networks (social clubs). Thus the corporation and NGOs functioning in the community need to provide activity groups and organisations for the older migrants.

Younger women who receive low levels of support (confiding and practical) from spouse are more likely to report psychiatric morbidity. Though no significant association was reached a large number of women reported receiving negative support (which led to anxiety and worry) from their spouses. Thus services which provide outlets and opportunity to form other supports such as mahila mandals (women's groups) are necessary for the younger women.

4.4 FUTURE RESEARCH NEEDS

4.4.1 Gynaecological and related morbidity conditions

Methods: This study and other studies conducted in India and other developing countries reveal a very high prevalence of gynaecological morbidity. One of the largest recent cross-sectional studies in this area (Bhatia and Cleland, 1995) also highlights that a) an urban setting is associated with higher perceived morbidity and b) women from households of low economic status, with less than six years of schooling and of lower caste are more likely to report symptoms of illness than other women. This is consistent with the findings of the present study.

In the light of clinical examinations and laboratory tests being too expensive (eight times more expensive than interviews - Bhatia and Cleland 1995 citing Belcher *et al.*, 1976) to be carried out on a large scale in community settings, there is an urgent need to develop simple and inexpensive screening procedures such as the interview survey, used in this study in different socio-cultural settings, to gauge the extent of women's

health problems. Such screening instruments should be developed jointly by social scientists, bio-stasticians, public health specialists and medical professionals. Validation of the survey interview and similar instruments in other settings in India and other developing countries is also necessary to make it more reliable for large scale use. Further, bearing in mind the sensitive nature of women's illnesses and the socio-cultural barriers to medical examinations, methods to identify infections at the early stages by the women themselves (for referral and early treatment), such as the vaginal swabs administered in rural Uganda to identify trichomonas vaginalis infection (Wawer *et al.*, 1995) need to be further investigated/researched for use in developing countries.

Two simultaneous issues which are thrown up by this research are i) the need for further research in low-income groups, especially vulnerable groups such as migrants in urban settings, to understand the linkages between health beliefs and health behaviour in different socio-cultural settings to make the system more responsive to their needs by for example, modifying health education messages to their beliefs and behaviour and ii) the women's ethnomedical framework for defining their illnesses, which needs to be further defined to help health providers to be better aware of the women's perceptions so that they can address their health needs in a more sensitive and effective way.

More detailed research into the perceptions of different socio-cultural groups, such as in the case of etiology of white discharge and the complex dynamics of decision making in the urban household would also help in designing more relevant and effective health education programmes for the women.

Lastly, as stated by several concerned groups and the WHO (1991), in resource scarce settings it is important to develop and include innovative research techniques that are participatory, multi-disciplinary and sensitive to the women's situation.

4.4.2 Mental health

Methods: The Hindi and Marathi versions of the SRQ-20 have proved to be a good measure to identify minor psychiatric morbidity in this study as the specificity and sensitivity of the instrument were high. Similar research in other local language versions of the instrument needs to be taken up in different parts of India to identify the mental health needs of the community populations. Research in the use of the SRQ-20 with the standardised questionnaire (instead of a gold standard) in community settings would also facilitate its use in settings where trained personnel/ psychiatrists are not accessible.

The fairly high incidence of minor psychiatric morbidity in the study sample, though not truly representative of all women in such settings, as it excluded older (not in the reproductive age group), pregnant, single and women in the post partum stage, points clearly to the need for further research in similar settings to quantify the psychological burden borne by this group. This would provide necessary evidence to convince health providers for the need to change health policy at primary health care level, to include mental health services at health posts and primary health centres.

Though poverty and socio-economic conditions have been widely reported to make people susceptible to mental ill-health, further research into social factors such as age (older women), the unemployed, non-Hindus (minority groups) and women reporting major illness is required to identify factors which make people, particularly women vulnerable to mental illness. Research is required in different socio-cultural settings to validate the findings of this and similar studies, as well as identify the 'process' of vulnerability through qualitative research methods.

The high association between reported gynaecological morbidity and psychiatric morbidity highlights the vulnerability created by certain illnesses, especially those with psycho-social impact. Research in groups or populations with such illnesses (Hansen's disease, Koch's disease, or AIDS) is necessary to identify the special mental health needs of such groups. Besides identifying the extent of illness and those vulnerable to it, and the burden it creates on health services, it is also necessary to conduct cost-effectiveness studies of alternative interventions. This would also help to establish the need for integration of mental health services at the primary health level.

4.4.3 Social support and networks

Methods: With increasing urbanisation and consequent breakdown of the traditional systems of support and care in South Asia, there is a need to develop instruments such as the CPQ to identify the support needs of the vulnerable groups, which due to socio-economic constraints do not have access to the existing and often sophisticated networks of the urban environment. Such research would help NGOs and other

concerned organisations in community settings to focus their existing programs as well as plan services better suited to the people's needs. For example in this study it is seen that young women only interact with their spouses or other female relatives or alternatively with groups or organisations where there is financial gain. Thus NGOs could plan activities for young women such as sewing, embroidery, making patchwork quilts etc. where the women meet regularly to work and earn together.

As this study shows older women and those who are isolated are more vulnerable to mental illness, whereas younger women with physical illnesses have few social supports. Thus research, both to identify social networks which would be accessible (such as religious groups) and provide support is urgently required to focus existing programmes and plan more relevant ones for new migrants as well as older people (old peoples clubs) whose links with their place of origin have been severed. Research is also needed to identify the processes by which certain kinds of social support (confiding, practical or negative) act as buffers to protect against certain illnesses (gynaecological morbidity, mental illness).

Urban India possesses a health system designed to meet the health needs of the urban poor (urban health posts), a fairly large NGO sector and a growing community of women activists concerned with women's empowerment and reproductive rights; given the scarce resources, the need of the hour is to make these systems more responsive to women's health needs by prioritising health services and designing interventional strategies based on the emic perspective or as women's activists say "listening to women's voices".

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APPENDICES

INTERVIEW QUESTIONNAIRE, HINDI AND MARATHI VERSIONS OF THE SRQ-20, ORIGINAL CPQ, GUIDELINES FOR EMIC PERSPECTIVE AND CODE BOOK FOR INTERVIEW QUESTIONNAIRE

Appendix A

APPENDIX A

INTERVIEW QUESTIONNAIRE

PART A: ELIGIBILITY CRITERIA FOR INCLUSION OF WOMEN

FORM NO : ..... (001 - 660)
INTERVIEWER : .....
DATE : .....

COLUMNS

1	2	3	4

Q1. Woman's Name :

Q2. Address :

Q3. Age in Years
Code actual
If woman's age between 16 to 45 years, continue interview

5 6

Q4. Marital Status

a) Currently married	1	
b) Divorced	2	
c) Separated	3	
d) Widowed	4	7

Q5. When were you married?

a) Less than 2 years ago	1	
b) 2 or more years ago	2	8

If b continue interview
If a end interview

Q6. Are you menstruating?

a) No	1	
b) Yes	2	9

If a discontinue interview
If b continue interview

Q7. Are you currently pregnant?

a) No	1	
b) Yes	2	
c) Does not know	3	10

If a, continue interview
If b, end interview

Q8. If c, ask when did you have your last menstrual period

a) more than 30 days ago 1
b) within the last 30 days 2

If b, continue interview
If a, end interview

11

Q9. How old is your youngest child?

a) Less than 60 days 1
b) More than 60 days 2

If a, discontinue interview
If b, continue interview

12

Q10. Have you ever been treated for mental illness in a psychiatric clinic?

a) No 1
b) Yes 2

If a, go on to Questionnaire Part B.
If b, end interview

13

PART B : BACKGROUND INFORMATION

Q11. What language do you speak at home

a) Marathi 1
b) Hindi 2
c) Urdu 3
d) Telugu 4
e) Tamil 5
f) Bhojpuri 6
g) Nepali 7
h) Other 8

14

Q12. Religion of respondent

a) Hindu 1
b) Muslim 2
c) Christian 3
d) Baudh 4
e) Other 5

15

Q13. How long have you lived in this area?

a) Born here
b) More than 10 years
c) Five to ten years
d) Less than five years

Code actual

16 17

Q14. Where did you stay, before you came to live in this area?

a) Urban	1	
b) Non-urban	2	
c) Missing	9	
		18

If a (urban), for how long did you stay in this area?

19 20

Q15. How long has your husband lived in this area?

Code actual

a) Born here	
b) More than 10 years	
c) Five to ten years	
d) Less than five years	

21 22

Q16. Where did your husband stay before coming to stay in this area?

a) Urban	1	
b) Non-urban	2	
c) Missing	9	
		23

If a (urban), how long did he stay in this area?

24 25

Q17. Place of birth

a) Thane	1	
b) Outside Thane (rural)	2	
c) Outside Thane (urban)	3	
		26

Q18. Educational level of respondent

a) No formal schooling	1	
b) Below matric	2	
c) Matric	3	
d) Post matric	4	27

Q19. Aside from the usual household work, do you earn some money outside the home?

a) No (Go to Question 17)	1	
b) Yes (Specify)	2	
		28

If yes,

a) Part-time -Formal	1	
b) Part-time -Informal	2	
c) Full-time -Formal	3	
d) Full-time -Informal	4	29
e) Other	5	

Q20. Husbands educational level

a) No formal schooling	1	
b) Below matric	2	
c) Matric	3	
d) Post matric	4	30

Q21. Is your husband employed?

a) No (go to question 20)	1	
b) Yes	2	31

If yes,

a) regular employment	1	
b) daily labourer	2	
c) occasional work only	3	
d) own business, specify	4	32
e) other, specify	5	

Q22. What is your family's combined monthly income?

a) Less than 100 rupees per month	1	
b) Between 1000 and 3000 rupees per month	2	33
c) Above 3000 rupees per month	3	

Q23. Are you using any form of contraceptives?

a) No (go to question 23)	1	
b) Yes	2	34

If yes, what kind?

a) Withdrawal	1	
b) Condoms	2	
c) IUD	3	
d) Injectibles	4	35
e) Oral pills	5	
f) Other	6	

Q24. Have you or your husband been sterilized?

a) No (go to question 23)	1	
b) Yes	2	36

If yes, specify

a) Tubectomy	1	
b) Vasectomy	2	37

If tubectomy, how long ago, in months

38

Q25. Have you ever been told by a doctor or another person that you have a condition or illness like heart disease, diabetes or other?

a) No 1
b) Yes, specify. 2

☐ 39

Q26. In the last month, have you felt unwell to the extent that you had difficulty carrying out your normal activities?

a) No 1
b) Yes 2

☐ 40

PART C : CHECKLIST FOR GYNAECOLOGICAL MORBIDITY

Menstrual Problems

Q27. Have you been having any problems with your menstruation?

a) No 1
b) Yes 2

☐ 41

Q28. Do you have a lot of pain during menstruation?

a) No 1
b) Yes 2

☐ 42

Q29. Have you been having spotting between periods during the last three months?

a) No 1
b) Yes 2

☐ 43

Reproductive Tract Infections

Q30. Have you had any abnormal vaginal discharge during the past three months?

a) No 1
b) Yes 2

☐ 44

Q31. Have you had severe itching, irritation down below?

a) No 1
b) Yes 2

☐ 45

Q32. Have you noticed a bad odour down below?

a) No 1
b) Yes 2

☐ 46

Q33. Have you had severe lower abdominal pain in the last three months?

a) No 1
b) Yes 2

47

Q34. Have you had a heavy vaginal discharge?

a) No 1
b) Yes 2

48

Prolapse

Q35. Do you feel something (mass/swelling) is coming out from down below (vagina)?

a) No 1
b) Yes 2

49

Q36. Do you feel something is coming out from down below when you cough or sneeze?

a) No 1
b) Yes 2

50

Q37. Do you leak urine when coughing or sneezing?

a) No 1
b) Yes 2

51

Infertility

Q38. Have you been trying to get pregnant and not succeeding?

a) No (go to question 40) 1
b) Yes 2

52

If yes, for how long in months.

a) Less than 12 months 1
b) More than 12 months 2

53

Q39. Have you been living with your husband all the time?

a) No 1
b) Yes 2

54

Dyspareunia (problems with intercourse)

Q40. Do you have pain during intercourse?

a) No (go to question 42) 1
b) Yes 2

55

Q41. For how long have you had pain during intercourse?
a) A few days 1
b) Several weeks or longer 2
56

Urinary problems

Q42. Have you been going frequently to the toilet to urinate at any time during the last three months?
a) No 1
b) Yes 2
57

Q43. Have you had a burning sensation while passing urine in the last three months?
a) No 1
b) Yes 2
58

Abortion Morbidity

Many women who get pregnant, (a) when they do not want another baby right then, will do something to end the pregnancy or will have an abortion performed or (b) have a miscarriage.

Q44. Have you had any pregnancy which ended this way (a or b) in the last three months?
a) No (go to question 45) 1
b) Yes 2
59

I would like to ask a few questions about the last miscarriage you had or pregnancy which you interrupted.

Q45. Did you have fever afterwards?
a) No 1
b) Yes 2
60

Q46. Did you bleed heavily afterwards?
a) No 1
b) Yes 2
61

IUD Morbidity

Q47. Have you used the IUD in the past one year?
a) No (go to question 51) 1
b) Yes 2
62

Q48. Do you have severe pain in the lower abdominal region after using the IUD?

a) No 1
b) Yes 2

☐ 63

Q49. Do you have excessive/ heavy vaginal discharge after insertion/ removal of the IUD?

a) No 1
b) Yes 2

☐ 64

Q50. Did you bleed heavily after insertion of the IUD? (not menstruation)

a) No 1
b) Yes 2

☐ 65

PART E : THE CLOSE PERSONS QUESTIONNAIRE

Social Life

Q51. This section concerns people in your life who you feel close to and from whom you can obtain support (either emotional or practical) including close relatives and good friends.

Who have you felt closest to in the last 12 months? Please describe in the terms of their relationship to you: (e.g WIFE, SON, AUNT, FEMALE FRIEND, MALE FRIEND). These are just examples and we would like you to mention whoever you feel closest to. If you feel close to more than one person, please list up to two:

THE PEOPLE YOU ARE CLOSEST TO:

Closest .....

☐ 66

Second Person .....

☐ 67

CARD 2

☐☐☐☐

1 2 3 4

Please tell us how you would rate the practical and emotional support each of the people you have mentioned above, provide for you (each column refers to one of the persons mentioned by the respondent).

Rate each person on a scale from 1 to 4 to show how well they have provided each stated type of support for G.M from (a to n) in : 1 - not at all; 2 - a little; 3 - quite a lot; 4 - a great deal.

	Closest person	Second person	Spouse (if not already mentioned
a) How much in the last 12 months did this person give you information, suggestions and guidance that you have found helpful?			
b) How much in the last 12 months could you rely on this person (was this person there when you needed him/her)?			
c) How much in the last 12 months did this person make you feel good about yourself?			
d) How much in the last 12 months did you share interests, hobbies and fun with this period?			
e) How much in the last 12 months did this person give you worries, problems and stress?			

This section is about confiding in people, that is talking frankly or sharing feelings with them. Rate each person on the scale from 1 to 4 to show how well they have provided each stated type of support : 1 - not at all; 2 - a little; 3 - quite a lot; 4 - a great deal.

	Closest person	Second person	Spouse (if not already mentioned
f) How much in the last 12 months did you want to confide in (talk frankly, share feelings with) this person?			
g) How much in the last 12 months did you confide in this person?			
h) How much in the last 12 months did you trust this person with your most personal worries and problems?			
i) How much in the last 12 months would you have liked to have confided more in this person?			
j) How much in the last 12 months did talking to this person make things worse?			
k) How much in the last 12 months did he/she talk about his/her personal worries with you?			

This section is about major and minor practical support. Rate each person on the scale from 1 to 4 to show how well they provide each stated type of support : 1 - not at all; 2 - a little; 3 - quite a lot; 4 - a great deal.

	Closest person	Second person	Spouse (if not already mentioned

---

l) How much in the last 12 months did you need practical help from this person with major things (e.g look after you when ill, help with finances, children)?

m) How much in the last 12 months did this person give you practical help with major things?

n) How much in the last 12 months would you have liked more practical help with major things from this person?

o) How much in the last 12 months did this person give you practical help with small things when you needed it (e.g chores, shopping, cleaning the gutter)?

	Confiding/ Emotional	Practical	Negative
Aggregates :			
Close Person	☐☐ 5 6	☐☐ 7 8	☐☐ 9 10
Second Person	☐☐ 11 12	☐☐ 13 14	☐☐ 15 16
Spouse	☐☐ 17 18	☐☐ 19 20	☐☐ 21 22

We would also like a few details on each of these people.

Mention the people you are closest to	Closest person	Second person	Spouse (if not already mentioned
p) How old are they? (in years)	☐☐ 23 24	☐☐ 36 37	☐☐ 49 50
q) What sex are they? (male/female)	☐ 25	☐ 38	☐ 51
r) What is their marital status (married, single other)?	☐ 26	☐ 39	☐ 52
s) Do they have children aged 16 or under now? (Yes/No)	☐ 27	☐ 40	☐ 53
t) How long have you known them (in years)?	☐☐ 28 29	☐☐ 41 42	☐☐ 54 55
u) Did they have further education after 18 years? (Yes/No/Do not know/Not applicable)	☐ 30	☐ 43	☐ 56
v) Do they work with you? (Yes/No)	☐ 31	☐ 44	☐ 57
w) About how many days did you see them in the last year (1 - 365)?	☐☐☐ 32 33 34	☐☐☐ 45 46 47	☐☐☐ 58 59 60
x) How close do they live to you (with you, or number of miles away)?	☐ 35	☐ 48	☐ 61

Q52. **Amongst your family and friends how many people are available to you with whom you talk frankly without having to watch what you say?**

None	1	
1 - 2	2	☐
3 - 5	3	
6 - 10	4	62
More than 10	5	

Q53. **Are there any relatives outside your household who you regularly visit or who visit you (not necessarily the same person each time)?**

Almost daily	1	
About once/week	2	☐
About once/month	3	
Once every few months	4	63
Never/almost never	5	
No relatives outside household	6	

Q54. **If woman is working, how often do you ever see anyone from work, socially out of work hours (excluding casual meetings during work)?**

N.A	0	
Almost daily	1	☐
About once/week	2	
About once/month	3	64
Once every few months	4	
Never/almost never	5	

Q55. a) **Do you have any friends or acquaintances you visit or who visit you (not necessarily the same person each time)?**

Almost daily	1	
About once/week	2	☐
About once/month	3	
Once every few months	4	65
Never/almost never	5	

b) **How many friends, relatives or acquaintances do you see once a month or more?**

None	1	
1 - 2	2	☐
3 - 5	3	
6 - 10	4	66
More than 10	5	

c) **Do you have any friends, relatives or acquaintances with whom you are in contact by letter?**

About once/week	1	☐
About once/month	2	
Once every few months	3	67
Never/almost never	4	

Q56. **How often do you attend religious services (apart from wedding and funerals)?**

Almost daily	1	
About once/week	2	☐
About once/month	3	
Once every few months	4	68
Never/almost never	5	

Q57. **Do you do any voluntary work for a group (like the adult literacy group or the mahila mandal)?**

Almost daily	1	
About once/week	2	☐
About once/month	3	
Once every few months	4	69
Never/almost never	5	

Q58. a) **Do you belong to any clubs or organisations (social group, trade unions, professional organisations, political parties, cultural groups, etc.)?**

No	1	☐
Yes	2	
		70

If no, go to Q59.

If yes,

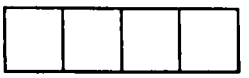
b) **Taking all the above together, how often do you attend?**

Almost daily	1	
About once/week	2	☐
About once/month	3	
Once every few months	4	71
Never/almost never	5	

Q59. **How often do you invite people over for dinner (or lunch)?**

About once/week	1	
About once/month	2	☐
Once every few months	3	
Never/almost never	4	72

CARD 3



1 2 3 4

PART D : THE SELF RESPONSE QUESTIONNAIRE 20 (ENGLISH VERSION)

	NO	YES	DK	
Q60. Do you often have headaches?	0	1	8	5
Q61. Is your appetite poor?	0	1	8	6
Q62. Do you sleep badly?	0	1	8	7
Q63. Are you easily frightened?	0	1	8	8
Q64. Do your hands shake?	0	1	8	9
Q65. Do you feel nervous, tense, worried?	0	1	8	10
Q66. Is your digestion poor?	0	1	8	11
Q67. Do you have trouble thinking clearly?	0	1	8	12
Q68. Do you feel unhappy?	0	1	8	13
Q69. Have you been crying more than usual?	0	1	8	14
Q70. Do you feel it difficult to enjoy your daily activities?	0	1	8	15

Q71. Do you find it difficult to make decisions?

0 1 8 16

Q72. Is your daily work suffering?

0 1 8 17

Q73. Are you unable to play a useful role in your life?

0 1 8 18

Q74. Have you lost interest in things?

0 1 8 19

Q75. Do you feel you are a worthless person?

0 1 8 20

Q76. Has the thought of ending your life been in your mind?

0 1 8 21

Q77. Do you feel tired all the time?

0 1 8 22

Q78. Do you have uncomfortable feelings in your stomach?

0 1 8 23

Q79. Are you easily tired?

0 1 8 24

Total Yeses: 25 26

Interviewer Code: 27

1 - H
2 - M
3 - T

Appendix B

एस. आर. क्यू. २०

१. क्या आपको अक्सर सिर दर्द रहता है ?

२. क्या आपको भूख ठीक तरह से नहीं लगती ?

३. क्या आपको नींद ठीक नही आती ?

४. क्या आप जल्दी डर जाते हैं ?

५. क्या आपके हाथ काँपते रहते हैं ?

६. क्या आपको घबराहट, चिन्ता या परेशानी रहती है ?

७. क्या आपका हाजमा ठीक नहीं [कमजोर] है ?

८. क्या आप ठीक तरह [साफ साफ] सोच नहीं पाते ?

९. क्या आप दुखी महसूस करते हैं ?

१०. क्या आपको पहले से ज्यादा रोना आता है ?

११. आपको रोज के काम काज में खुशी नहीं होती ?

१२. किसी बात का फैसला करना हो तो क्या कोई मुश्किल होती है ?

१३. [किसी वजह से] आपके रोज के काम काज में हरजा हो रहा है ?

१४. क्या आपको ऐसा लगता है कि आप अपना काम पूरा नहीं कर पा रहे हैं ?

१५. क्या अब किसी भी चीज में दिल नहीं लगता ?

१६. क्या ऐसा लगता है कि आप बेकार हैं किसी काम के नहीं ?

१७. क्या आपके मन में अपने आपको खत्म करने का विचार आया है ?

१८. क्या आप हर समय थके थके से [थकावट] महसूस करते हैं ?

१९. क्या आप पेट या छाती में बेचैनी महसूस करते हैं ?

२०. क्या आप जल्दी थक जाते हैं ?

Appendix C

APPENDIX C: MARATHI VERSION OF THE SRQ 20

एस. आर. क्यू. २०

१] तुमचे नेहमी डोके दुखते का ?

२] तुम्हाला भूक नीट लागत नाही का ?

३] तुम्हाला झोप नीट लागत/येत नाही का ?

४] तुम्ही लवकर घाबरता का ?

५] तुमचे हात थरथरतात का ?

६] तुम्हाला भिती, चिंता किंवा काळजी आहे का ?

७] तुमचे पोट साफ नाही का ?

८] तुम्ही नीट विचार करु शकत नाही का ?

९] तुम्ही दु:खी आहात का ?

१०] तुम्हाला आधीपेक्षा आता जास्त रडायला येते का ?

११] तुम्ही दररोजच्या कामात खूष नाहीत का ?

१२] तुम्हाला कोणता निर्णय/फैसला घेताना/ करताना अडचण होते का?

१३] तुम्हाला दररोजच्या कामाचा कंटाळा येतो का ?

१४] तुम्हाला असं वाटते का की, तुम्ही तुमचे काम पुर्ण करु शकत नाही ?

१५] तुमचे आता कुठल्या कामात मन लागत नाही का ?

१६] तुम्हाला असे वाटते का की तुम्ही बेकार आहात, काही कामाच्या नाहीत ?

१७] तुमच्या मनात कधी/आत्महत्येचा/स्वत:चे आयुष्य संपवण्याचा विचार येतो का ?

१८] तुम्हाला नेहमी थकल्या थकल्या सारखे वाटते का ?

१९] तुमच्या पोटात किंवा छातीत बेचैनी जाणवते का ?

२०] तुम्ही लवकर थकतात का ?

Appendix D

APPENDIX D: CLOSE PERSONS QUESTIONNAIRE (CPQ)

SOCIAL LIFE
Q 59

This section concerns people in your life who you feel close to and from whom you can obtain support (either emotional or practical) including close relatives and good friends.

How many people do you feel very close to? (It does not matter where they live or whether you have seen them recently).

PLEASE WRITE NUMBER IN THIS BOX ☐

Who have you felt closest to in the last 12 months? Please describe in terms of their relationship to you: (e.g. WIFE, SON, AUNT, BOYFRIEND, MALE FRIEND, FEMALE FRIEND). Remember these are just examples and we would like you to write in whoever you feel closest to. If you feel close to more than one person, please list up to four below:-

WRITE IN THE PEOPLE YOU ARE CLOSEST TO HERE:-

Closest.....
Second person .....
Third person .....
Fourth person .....

IF YOU ARE MARRIED NOW AND HAVE NOT PUT YOUR HUSBAND/WIFE IN ALREADY PLEASE INCLUDE HIM/HER ON THE FIFTH LINE

Fifth.....

On the opposite page please tell us how you would rate the practical and emotional support each of the people you have listed above provide for you. (Each column refers to one of the persons you have listed above). Rate each person on the scale from 1-4 to show how well they have provided each stated type of support from (a-n) **IN THE LAST 12 MONTHS**

1	2	3	4
Not at all	A little	Quite a lot	A great deal

for example:-

If the person you are closest to is your wife and the second a male friend, the columns on the next page might look like this:-

Write in the people you are closest to here:-	Closest Person	Second Person
a)...How much in the last 12 months.. did this person give you **information, suggestions** and **guidance** that you found helpful?		

i.e "a great deal" from wife, "a little" from friend. Of course this is only an example. Please complete each row a - n on the 1 - 4 scale for the people listed above.

Rate each person on the scale from 1 - 4 to show how well they have provided each stated type of support:
1 = not at all 2 = a little 3 = quite a lot 4 = a great deal

Write the people you are closest to here:-.....	Closest Person	Second Person	Third Person	Fourth Person	Spouse (if not already covered)
a)..How much in the last 12 months.. did this person give you **information, suggestions** and **guidance** that you found helpful?					
b)..How much in the last 12 months.. could you **rely** on this person (was this person there when you needed him/her?)					
c)..How much in the last 12 months.. did this person make you **feel** good about yourself?					
d)..How much in the last 12 months.. did you **share** interests, hobbies and fun with this person?					
e)..How much in the last 12 months.. did this person give you **worries, problems** and **stress**?					

This section is about **confiding** in people, that is talking frankly or sharing feelings with them. Rate each person on the scale from 1 - 4 to show how well they have provided each stated type of support:
1 = not at all 2 = a little 3 = quite a lot 4 = a great deal.

Write the people you are closest to here:-.....	Closest Person	Second Person	Third Person	Fourth Person	Spouse (if not already covered)
f)..How much in the last 12 months.. did you **want to confide** in (talk frankly, share feelings with this person?)					
g)..How much in the last 12 months.. **did you confide** in this person?					
h)..How much in the last 12 months.. did you trust this person with your most personal worries and problems?					
i)..How much in the last 12 months.. would you have **liked to have confided more** in this person?					
j)..How much in the last 12 months.. did talking to this person make things worse?					
k)..How much in the last 12 months.. did he/she talk about his/her personal worries with you?					

This section is about major and minor practical support. Rate each person on the scale from 1 - 4 to show how well they provided each stated type of support

1 = not at all 2 = a little 3 = quite a lot 4 = a great deal

Write the people you are closest to here:-.....	Closest Person	Second Person	Third Person	Fourth Person	Spouse (if not already covered)
l)..How much in the last 12 months.. did you **need** practical help from this person with **major** things (e.g.look after you when you were ill, help with finances, children)?					
m)..How much in the last 12 months.. did this person give you **practical** help with major things?					
n)..How much in the last 12 months.. would you have **liked more practical** help with major things from this person?					
o)..How much in the last 12 months.. did this person give you **practical** help with **small** things when you needed it? (e.g. chores, shopping, watering plants etc.)					

Continued

continued

We would also like a few details on each of these people:-

Write the people you are closest to here:-	Closest Person	Second Person	Third Person	Fourth Person	Spouse (if not already covered)
p) How old are they? (in years)					
q) What sex are they? (male/ female)					
r) What is their marital status (married, single, other)?					
s) Do they have children aged 16 or under now? (Yes/No)					
t) How long have you known them? (in years)					
u) Did they have further education after 18 years? Yes No Don't know Not applicable					
v) Do they work with you? (Yes/No)					
w) About how many days did you see them in the last year (1-365)?					
x) How close do they live to you (with you, or number of miles away)?					

y) All things considered how satisfied or dissatisfied are you overall with your own personal relationships? Please circle one of the numbers on the 1 - 7 scale below to show how satisfied or dissatisfied you feel:-

Very dissatisfied	Moderately dissatisfied	A little dissatisfied	No feelings either way	A little satisfied	Moderately satisfied	Very satisfied
1	2	3	4	5	6	7

z) All things considered how satisfied or dissatisfied are you with the way you spend your leisure time? Please circle one of the numbers on the 1 - 7 scale below to show how satisfied or dissatisfied you feel:-

Very dissatisfied	Moderately dissatisfied	A little dissatisfied	No feelings either way	A little satisfied	Moderately satisfied	Very satisfied
1	2	3	4	5	6	7

Q60.a) Amongst your family and friends how many people are available to you with whom you talk frankly without having to watch what you say?

None	1
1 - 2	2
3 - 5	3
6 - 10	4
More than 10	5

b) Are there times when you are comforted by being held in someone's arms?

Almost daily	1
About once/week	2
About once/month	3
Never	4

Q 61.a) Are there any relatives outside your household who you regularly visit or who visit you? (not necessarily the same person each time)

Almost daily	1
About once/week	2
About once/month	3
Once every few months	4
Never/almost never	5
No relatives outside household	6

If no relatives outside household go to Question 62

b) How many relatives do you see once a month or more?

None	1
1 - 2	2
3 - 5	3
6 - 10	4
More than 10	5

Q 62. How often do you ever see anyone from work, socially out of work hours? (Excludes casual lunchtime meetings)

Almost daily	1
About once/week	2
About once/month	3
Once every few months	4
Never/almost never	5

Q 63.a) Do you have any friends or acquaintances you visit or who visit you? (not necessarily the same person each time)

Almost daily	1
About once/week	2
About once/month	3
Once every few months	4
Never/almost never	5

b) How many friends or acquaintances do you see once a month or more?

None	1
1 - 2	2
3 - 5	3
6 - 10	4
More than 10	5

c) Do you have any friends or acquaintances with whom you are in contact only by telephone or letter?

Almost daily	1
About once/week	2
About once/month	3
Once every few months	4
Never/almost never	5

Q 64. How often do you attend religious services?
(apart from weddings and funerals)

Almost daily	1
About once/week	2
About once/month	3
Once every few months	4
Never/almost never	5

Q 65. Do you do any voluntary work for other people (e.g. visiting sick, disabled or elderly, belonging to Friends of the Hospital etc.)

Almost daily	1
About once/week	2
About once/month	3
Once every few months	4
Never/almost never	5

Q 66. a) Do you belong to any clubs or organisations? (Social or recreational groups, trade union, commercial groups, professional organisations, political parties, sports clubs, cultural groups, pressure groups etc.)

Yes	1
No	2

If NO, go to Question 67

If Yes,
b) Taking all the above together, how often do you attend?

Almost daily	1
About once/week	2
About once/month	3
Once every few months	4
Never/almost never	5

Q 67. How often do you have parties at home? (including small dinner parties)

4 or more times a week	1
About once/week	2
About once/month	3
Once every few months	4
Never/almost never	5

Appendix E

APPENDIX E: GUIDELINES FOR THE EMIC PERSPECTIVE

Q1) Free listing of women's illness.

Q2) What do you call the morbidity condition faced by you ? (woman's words).

Q3) What do you think is the cause of this problem/ symptom:

a) first perceived cause -in childhood, any incident years ago, recent cause, food intake bio-medical

b)

i) any belief which turned to be a cause, moral outcome of behaviour, religious or magical belief, psycho-social stresses

ii) origins of belief and related ideas

c) first perceived cause and change over time

Q4) What are the ways in which the symptoms affect you?

a) Physical ways: pain, burning sensation, giddiness, unable to work or carry out daily activities because of physical pain, loss of mobility.

b) Social ways: cannot attend religious ceremonies, sit among women, temple, social stigma (in case of infertility or inability to have intercourse).

c) Emotional psycho-ways: low self-image, fear anxiety disgust due to inability to work.

Q5) What is the most troubling aspect of the problem ?

Q6) What do you fear most about the problem ? Anticipated outcome -what has happened, what will happen in future and why do you fear so ? Any past experience heard about such problem.

Q7) What precautions do you take to lessen the symptoms (if you take some). What kind of control (food intake activities, exercise you think would lessen the problem).

Q8) Do you think you need to take treatment for these symptoms ? Or will it get cured along with time ? If yes, how long would it take ?

Q9) What kind of Rx would you take first, home remedies, religious action for treatment, medical treatment.

Q10) Which treatment (professional, local, quack) do you think would help and how effectively (lessening of pain, complete cure etc.)

Q11) Whom would you approach first? Doctor, chemist, compounder, medical officer, dai. Why ?

Q12) Knowledge of body : Draw the affected organs and discuss location, vis-a-vis other organs as well as causation and origin of knowledge.

Appendix F

APPENDIX F: CODE BOOK FOR INTERVIEW QUESTIONNAIRE

V101	1-3	SERIAL NUMBER	001-710	
V102	4	CARD NUMBER	1	
V103	5-6	RESPONDENT AGE	16-45 99	 MISSING
V104	7	MARITAL STATUS	1 2 3 4 9	CURRENT MARRIED DIVORCED SEPARATED WIDOWED MISSING
V105	8	MARRIAGE DURATION	1 2 9	LESS THAN 2 YEARS 2 OR MORE YEARS MISSING
V106	9	MENSTRUAL	1 2 9	NO YES MISSING
V107	10	PREGNANT	1 2 9	NO YES MISSING
V108	11	LAST PERIOD	1 2 9	MORE THAN 30 DAYS WITHIN LAST 30 DAYS MISSING
V109	12	YOUNGEST CHILD AGE	0 1 2 9	NO CHILD LESS THAN 60 DAYS MORE THAN 60 DAYS MISSING
V110	13	MENTAL ILLNESS	1 2 9	NO YES MISSING

V111	14	LANGUAGE OF RESPONDENT	1 2 3 4 5 6 7 8 9	MARATHI HINDI URDU TELGU MALYALMAM BHOJPURI NEPALI OTHERS :TAMIL,GUJR ATI,BENGALI ,KANNADA,KO NKANI,WADAR I. MISSING
V112	15	RELIGION OF RESPONDENT	1 2 3 4 5 8 9	HINDU MUSLIM CHRISTIAN BAUDH ADIVASI OTHER MISSING
V113	16-17	LENGTH OF RESPONDENT RESIDENCE IN COMMUNITY	01-98 99	 MISSING
V114	18	RESPONDENT PREVIOUS RESIDENCE	0 1 2 9	NA URBAN NON-URBAN MISSING
V115	19-20	RESPONDENT LENGTH OF PREVIOUS URBAN RESIDENCE	00-01 98 99	NA MISSING
V116	21-22	LENGTH OF HUSBAND RESIDENCE IN COMMUNITY	00-01 98 99	NO HUSBAND MISSING
V117	23	HUSBAND PREVIOUS RESIDENCE	0 1 2 9	NA URBAN NON-URBAN MISSING
V118	24-25	HUSBAND LENGTH OF PREVIOUS URBAN RESIDENCE	00-01 98 99	NA MISSING
V119	26	PLACE OF BIRTH OF RESPONDENT	1 2 3 9	THANE OUTSIDE THANE (URBAN) OUTSIDE THANE (RURAL) MISSING

V120	27	RESPONDENT EDUCATIONAL LEVEL	1 2 3 4 9	NO FORMAL SCHOOLING BELOW MATRIC MATRIC POST MATRIC MISSING
V121	28	RESPONDENT EMPLOYED	1 2 9	NO YES MISSING
V122	29	RESPONDENT TYPE OF OCCUPATION	0 1 2 3 4 5 9	NA PART-TIME FORMAL PART-TIME INFORMAL FULL-TIME FORMAL FULL-TIME INFORMAL OCCASIONAL WORK MISSING
V123	30	HUSBAND EDUCATIONAL LEVEL	1 2 3 4 9	NO FORMAL SCHOOLING BELOW MATRIC MATRIC POST MATRIC MISSING
V124	31	HUSBAND EMPLOYED	1 2 9	NO YES MISSING
V125	32	HUSBAND TYPE OF OCCUPATION	0 1 2 3 4 5 9	NA REGULAR EMPLOYMENT DAILY LABOURER OCCASIONAL WORK OWN BUSINESS OTHER MISSING

V126	33	TOTAL FAMILY MONTHLY INCOME	1 2 3 8 9	LESS THAN RS. 999 PER MONTH RS. 1000-3000 PER MONTH RS. 3000 AND ABOVE PER MONTH DON'T KNOW MISSING
V127	34	USE OF CONTRACEPTIVE	1 2 9	NO YES MISSING
V128	35	KIND OF CONTRACEPTIVE USED	0 1 2 3 4 5 6 9	NA WITHDRAWAL CONDOMS IUD INJECTIBLES ORAL PILLS OTHER MISSING
V129	36	RESPONDENT OR HUSBAND STERILISED	0 1 2 9	NA NO YES MISSING
V130	37	TYPE OF STERILISATION	0 1 2 9	NA TUBECTOMY VASECTOMY MISSING
V131	38	ELAPSED TIME SINCE STERILISATION	0 1 2 3 4 9	NA LESS THAN 3 MONTHS 3 MONTHS TO 3 YEARS 3 YEARS TO 6 YEARS MORE THAN 6 YEARS MISSING
V132	39	PRESENCE OF MAJOR ILLNESS	1 2 9	NO YES MISSING
V133	40	DAILY LIVING ACTIVITIES AFFECTED	1 2 9	NO YES MISSING
V134	41	PROBLEMS WITH MENSTRUATION	1 2 9	NO YES MISSING

V135	42	PAIN DURING MENSTRUATION	1 2 9	NO YES MISSING
V136	43	SPOTTING BETWEEN PERIODS	1 2 9	NO YES MISSING
V137	44	PRESENCE OF VAGINAL DISCHARGE	1 2 9	NO YES MISSING
V138	45	SEVERE ITCHING/ IRRITATION	1 2 9	NO YES MISSING
V139	46	PRESENCE OF BAD ODOUR	1 2 9	NO YES MISSING
V140	47	PRESENCE OF ABDOMINAL PAIN	1 2 9	NO YES MISSING
V141	48	PRESENCE OF HEAVY VAGINAL DISCHARGE	1 2 9	NO YES MISSING
V142	49	FEEL SOMETHING HEAVY DOWN BELOW	1 2 9	NO YES MISSING
V143	50	FEEL SOMETHING COMING OUT DOWN BELOW	1 2 9	NO YES MISSING
V144	51	LEAKING URINE ON COUGHING, SNEEZING	1 2 9	NO YES MISSING
V145	52	FAILING TO GET PREGNANT	0 1 2 9	NA NO YES MISSING
V146	53	LENGTH OF TIME TRYING TO GET PREGNANT	0 1 2 9	NA LESS THAN 12 MONTHS MORE THAN 12 MONTHS MISSING
V147	54	LIVED WITH HUSBAND ALL THIS TIME	0 1 2 9	NA NO YES MISSING

V148	55	PRESENCE OF PAIN DURING INTERCOURSE	0 1 2 9	NA NO YES MISSING
V149	56	DURATION OF PAIN DURING INTERCOURSE	0 1 2 9	NA A FEW DAYS SEVERAL WEEKS OR LONGER MISSING
V150	57	FREQUENTLY URINATING	1 2 9	NO YES MISSING
V151	58	BURNING SENSATION ON URINATION	1 2 9	NO YES MISSING
V152	59	ABORTION HISTORY	0 1 2 9	NA NO YES MISSING
V153	60	FEVER AFTER ABORTION	0 1 2 9	NA NO YES MISSING
V154	61	HEAVY BLEEDING AFTER ABORTION	0 1 2 9	NA NO YES MISSING
V155	62	USE OF IUD	0 1 2 9	NA NO YES MISSING
V156	63	PAIN AFTER USE OF IUD	0 1 2 9	NA NO YES MISSING
V157	64	VAGINAL DISCHARGE AFTER USE OF IUD	0 1 2 9	NA NO YES MISSING
V158	65	BLEEDING AFTER USE OF IUD	0 1 2 9	NA NO YES MISSING

V159	66	CLOSEST PERSON	1 2 3 4 5 6 7 8 9	HUSBAND FRIEND MOTHER NEIGHBOUR (NOT RELATIVE) NEIGHBOUR (RELATIVE) MOTHER-IN-LAW CHILD OTHER RELATIVE (NOT NEIGHBOUR) MISSING
V160	67	SECOND CLOSEST PERSON	0 1 2 3 4 5 6 7 8 9	NA HUSBAND FRIEND MOTHER NEIGHBOUR (NOT RELATIVE) NEIGHBOUR (RELATIVE) MOTHER-IN-LAW CHILD OTHER RELATIVE (NOT NEIGHBOUR) MISSING
V201	1-3	SERIAL NUMBER	001-710	
V202	4	CARD NUMBER	2	
V203	5-6	AGGREGATE OF CONFIDING SUPPORT FOR CLOSEST PERSON	00 07-28 99	NA MISSING
V204	7-8	AGGREGATE OF PRACTICAL SUPPORT FOR CLOSEST PERSON	00 03-12 99	NA MISSING
V205	9-10	AGGREGATE OF NEGATIVE ASPECTS FOR CLOSEST PERSON	00 04-16 99	NA MISSING

V206	11-12	AGGREGATE OF CONFIDING SUPPORT FOR SECOND PERSON	00 07-28 99	NA MISSING
V207	13-14	AGGREGATE OF PRACTICAL SUPPORT FOR SECOND PERSON	00 03-12 99	NA MISSING
V208	15-16	AGGREGATE OF NEGATIVE ASPECTS OF SUPPORT FOR SECOND PERSON	00 04-16 99	NA MISSING
V209	17-18	AGGREGATE OF CONFIDING SUPPORT FOR SPOUSE	00 07-28 99	NA MISSING
V210	19-20	AGGREGATE OF PRACTICAL SUPPORT FOR SPOUSE	00 03-12 99	NA MISSING
V211	21-22	AGGREGATE OF NEGATIVE ASPECTS OF SUPPORT FOR SPOUSE	00 04-16 99	NA MISSING
V212	23-24	AGE OF CLOSEST PERSON	01-98 99	 MISSING
V213	25	SEX OF CLOSEST PERSON	1 2 9	MALE FEMALE MISSING
V214	26	MARITAL STATUS OF CLOSEST PERSON	1 2 3 4 5 8 9	CURRENT MARRIED DIVORCED SEPARATED WIDOWED SINGLE OTHER MISSING
V215	27	CLOSEST PERSON HAS CHILDREN 16 YEARS OR UNDER	1 2 9	NO YES MISSING
V216	28-29	LENGTH OF ACQUAINTANCE WITH CLOSEST PERSON	01-30 99	 MISSING
V217	30	CLOSEST PERSON EDUCATED BEYOND 18 YEARS	1 2 8 9	NO YES DON'T KNOW MISSING
V218	31	WORK WITH CLOSEST PERSON	1 2 9	NO YES MISSING

V219	32-34	SEEN CLOSEST PERSON IN A YEAR (FREQUENCY)	001-365 999	 MISSING
V220	35	DISTANCE OF RESIDENCE FROM CLOSEST PERSON	1 2 3 4 5 6 9	SAME COMMUNITY THANE, BUT NOT SAME COMMUNITY BOMBAY, BUT NOT THANE MAHARASHTRA, NOT THANE OTHER STATE OUTSIDE INDIA MISSING
V221	36-37	AGE OF SECOND PERSON	00 01-98 99	NA MISSING
V222	38	SEX OF SECOND PERSON	0 1 2 9	NA MALE FEMALE MISSING
V223	39	MARITAL STATUS OF SECOND PERSON	0 1 2 3 4 5 8 9	NA CURRENT MARRIED DIVORCED SEPARATED WIDOWED SINGLE OTHER MISSING
V224	40	SECOND PERSON HAS CHILDREN 16 YEARS OR UNDER	0 1 2 9	NA NO YES MISSING
V225	41-42	LENGTH OF ACQUAINTANCE WITH SECOND PERSON	00 01-30 99	NA MISSING
V226	43	SECOND PERSON EDUCATED BEYOND 18 YEARS	0 1 2 8 9	NA NO YES DON'T KNOW MISSING
V227	44	WORK WITH SECOND PERSON	0 1 2 9	NA NO YES MISSING

V228	45-47	SEEN SECOND PERSON IN YEAR	000 001-365 999	NA MISSING
V229	48	DISTANCE OF RESIDENCE FROM SECOND PERSON	0 1 2 3 4 5 6 9	NA SAME COMMUNITY THANE, BUT NOT SAME COMMUNITY BOMBAY BUT NOT THANE MAHARASHTRA BUT NOT BOMBAY OTHER STATE OUTSIDE INDIA MISSING
V230	49-50	AGE OF SPOUSE	00 01-98 99	NA MISSING
V231	51	SEX OF SPOUSE	0 1 2 9	N MALE FEMALE MISSING
V232	52	MARITAL STATUS OF SPOUSE	0 1 2 3 4 5 8 9	NA CURRENT MARRIED DIVORCED SEPARATED WIDOWED SINGLE OTHER MISSING
V233	53	SPOUSE HAS CHILDREN 16 YEARS OR UNDER	0 1 2 9	NA NO YES MISSING
V234	54-55	LENGTH OF ACQUAINTANCE WITH SPOUSE	00 01-30 99	NA MISSING
V235	56	SPOUSE EDUCATED BEYOND 18 YEARS	0 1 2 8 9	NA NO YES DON'T KNOW MISSING
V236	57	WORK WITH SPOUSE	0 1 2 9	NA NO YES MISSING

V237	58-60	SEEN SPOUSE IN YEAR (FREQUENCY)	000 001-365 999	NA MISSING
V238	61	DISTANCE OF RESIDENCE FROM SPOUSE	0 1 2 3 4 5 6 9	NA SAME COMMUNITY THANE, BUT NOT SAME COMMUNITY BOMBAY, BUT NOT THANE MAHARASHTRA , BUT NOT BOMBAY OTHER STATE OUTSIDE INDIA MISSING
V239	62	NO RELATIVES, FRIENDS AVAILABLE FOR FRANK TALK	1 2 3 4 5 9	NONE 1-2 3-5 6-10 MORE THAN 10 MISSING
V240	63	FREQUENCY OF VISITING RELATIVES	1 2 3 4 5 6 9	ALMOST DAILY ABOUT ONCE PER WEEK ABOUT ONCE PER MONTH ONCE EVERY FEW MONTHS NEVER, ALMOST NEVER NO RELATIVES OUTSIDE HOUSEHOLD MISSING

V241	64	FREQUENCY OF MEETING CO-WORKERS SOCIALLY	0 1 2 3 4 5 9	NA ALMOST DAILY ABOUT ONCE PER WEEK ABOUT ONCE PER MONTH ONCE EVERY FEW MONTHS NEVER, ALMOST NEVER MISSING
V242	65	FREQUENCY OF VISITING FRIENDS	1 2 3 4 5 9	ALMOST DAILY ABOUT ONCE PER WEEK ABOUT ONCE PER MONTH ONCE EVERY FEW MONTHS NEVER, ALMOST NEVER MISSING
V243	66	NUMBER OF FRIENDS SEEN PER MONTH	1 2 3 4 5 9	NONE 1-2 3-5 6-10 MORE THAN 10 MISSING
V244	67	FREQUENCY OF CONTACT WITH FRIENDS BY LETTER	1 2 3 4 9	ABOUT ONCE PER WEEK ABOUT ONCE PER MONTH ONCE EVERY FEW MONTHS NEVER, ALMOST NEVER MISSING

V245	68	FREQUENCY OF ATTENDANCE OF RELIGIOUS SERVICE	1 2 3 4 5 9	ALMOST DAILY ABOUT ONCE PER WEEK ABOUT ONCE PER MONTH ONCE EVERY FEW MONTHS NEVER, ALMOST NEVER MISSING
V246	69	FREQUENCY OF VOLUNTARY WORK	1 2 3 4 5 9	ALMOST DAILY ABOUT ONCE PER WEEK ABOUT ONCE PER MONTH ONCE EVERY FEW MONTHS NEVER, ALMOST NEVER MISSING
V247	70	MEMBERSHIP OF CLUB OR ORGANISATION	1 2 9	NO YES MISSING
V248	71	FREQUENCY OF ATTENDANCE AT CLUB OR ORGANISATION	0 1 2 3 4 5 9	NA ALMOST DAILY ABOUT ONCE PER WEEK ABOUT ONCE PER MONTH ONCE EVERY FEW MONTHS NEVER, ALMOST NEVER MISSING
V249	72	FREQUENCY OF INVITING PEOPLE FOR MEALS	1 2 3 4 9	ABOUT ONCE PER WEEK ABOUT ONCE PER MONTH ONCE EVERY FEW MONTHS NEVER, ALMOST NEVER MISSING

V301	1-3	SERIAL NUMBER	001-700	
V302	4	CARD NUMBER	3	
V303	5	HEADACHE OFTEN	0 1 8 9	NO YES DON'T KNOW MISSING
V304	6	POOR APPETITE	0 1 8 9	NO YES DON'T KNOW MISSING
V305	7	SLEEP BADLY	0 1 8 9	NO YES DON'T KNOW MISSING
V306	8	EASILY FRIGHTENED	0 1 8 9	NO YES DON'T KNOW MISSING
V307	9	HANDS SHAKE	0 1 8 9	NO YES DON'T KNOW MISSING
V308	10	FEEL NERVOUS, TENSE, WORRIED	0 1 8 9	NO YES DON'T KNOW MISSING
V309	11	POOR DIGESTION	0 1 8 9	NO YES DON'T KNOW MISSING
V310	12	TROUBLE THINKING CLEARLY	0 1 8 9	NO YES DON'T KNOW MISSING
V311	13	FEEL UNHAPPY	0 1 8 9	NO YES DON'T KNOW MISSING
V312	14	CRYING MORE THAN USUAL	0 1 8 9	NO YES DON'T KNOW MISSING
V313	15	DIFFICULTY TO ENJOY DAILY ACTIVITIES	0 1 8 9	NO YES DON'T KNOW MISSING

V314	16	DIFFICULT TO MAKE DECISIONS	0 1 8 9	NO YES DON'T KNOW MISSING
V315	17	DAILY WORK SUFFERING	0 1 8 9	NO YES DON'T KNOW MISSING
V316	18	UNABLE TO PLAY USEFUL ROLE	0 1 8 9	NO YES DON'T KNOW MISSING
V317	19	LOST INTEREST IN THINGS	0 1 8 9	NO YES DON'T KNOW MISSING
V318	20	FEEL A WORTHLESS PERSON	0 1 8 9	NO YES DON'T KNOW MISSING
V319	21	THOUGHT OF ENDING LIFE	0 1 8 9	NO YES DON'T KNOW MISSING
V320	22	FEEL TIRED ALL THE TIME	0 1 8 9	NO YES DON'T KNOW MISSING
V321	23	UNCOMFORTABLE FEELINGS IN STOMACH	0 1 8 9	NO YES DON'T KNOW MISSING
V322	24	EASILY TIRED	0 1 8 9	NO YES DON'T KNOW
V323	25-26	TOTAL NUMBER OF YES TO SRQ 20	00-20 99	 MISSING
V324	27	INTERVIEWER	1 2 3	HARSHA MEENA TEJA

MISSING PAGES ARE UNAVAILABLE

Appendix G

APPENDIX G: SOCIAL NETWORK MEASURES

Social Networks

Q 53 Are there any relatives outside your household who you regularly visit or who visit you ?

1= Almost daily
2= About once a week
3= About once a month
4= Once every few months
5= Never/almost never

Q 54 How often do you ever see anyone from work, socially out of work hours ?

1= Almost daily
2= About once/week
3= About once/month
4= Once every few months
5= Never/almost never

Q 55a Do you have any friends or acquaintances you visit or who visit you ? (not necessarily the same person each time)

1= Almost daily
2= About once/week
3= About once/month
4= Once every few months
5= Never/almost never

Q 55b How many relatives do you see once a month or more ?

1= None
2= 1 - 2
3= 3 - 5
4= 6 - 10
5= More than 10

Q 56 How often do you attend religious services (apart from weddings and funerals)

1= Almost daily
2= About once/week
3= About once/month
4= Once every few months
5= Never/almost never

Q 58b Do you belong to any clubs or organisations ? (Social or recreational groups, trade union, political parties, sports clubs, cultural groups, pressure groups etc)

1= Yes
2= No

If Yes to 58a, then

Q 58b Taking all the above together, how often do you attend ?

1= Almost daily
2= About once/week
3= About once/month
4= Once every few months
5= Never/almost never

Q 59 How often do you invite people over for meals ?

1= About once/week
2= About once/month
3= Once every few months
4= Never/almost never

Scoring of network measures

A. Isolation scale (0-5)

Score 1 for each possible area of social contacts if no contacts as follows:

relatives	score 1 if 53=5, or 55b=1
work	score 1 if 54=5
friends	score 1 if 55=5
religion	score 1 if 56=5
clubs	score 1 if 58a or 58b=5

B. Network beyond the household scale (scored 0-28)

First 58b is coded as 5(Never) if 58a = 2
Then, before summing, all of the following recoded as 0 - 4 (instead of 1 - 5) and scores reversed for:
53, 54, 55, 56, 58.

Network beyond the household scale = sum of 53+54+55+55b+58b+59